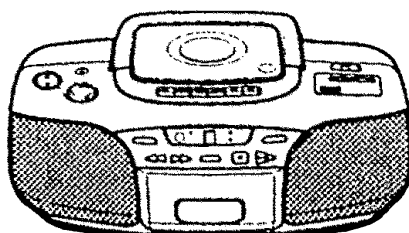


**CSD-A170** U(S),K(S),HA(S)

**CSD-A110** EZ(S,L),HR(S)

**CSD-A100** K(S),EZ(S,L,P)  
,HE(S),HT(S)

**CSD-A99** K(S)



# SERVICE MANUAL

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COMPACT DISC RADIO  
CASSETTE RECORDER

BASIC TAPE MECHANISM : ZZM-1 YR2NF  
BASIC CD MECHANISM : DA11T3C

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This Service Manual is the "Revision Publishing" and replaces "Simple Manual"  
CSD-A100 K(S),EZ(S)/A110 EZ(S)/A170 K(S)(S/M Code No. 09-003-342-2T2)  
CSD-A170 U(S),HA(S)/A110 EZ(L),HR(S)/A100 HE(S),HT(S),EZ(L,P)/A99 K(S)  
(S/M Code No. 09-003-342-2T4).

# SPECIFICATIONS

## HR, HE MODELS

### Tuner section

Frequency range, antenna — FM: 87.5 - 108.0 MHz Rod antenna,  
AM: 530 - 1,605 kHz Ferrite bar antenna

### Deck section

Track format — 4 tracks, 2 channels / Frequency range — Normal tape:  
50 - 12,500 Hz (EIAJ) / Recording system — AC bias / Erasing system  
— Magnet erase / Heads — Recording/playback head (1), Erasure head (1)

### CD player section

Disc — Compact disc / Scanning method — Non-contact optical scanner  
(semiconductor laser)

### General

Speaker — 100 mm cone type (2) / Output — Headphones jack (stereo mini-jack) / Power output — 2.5 W + 2.5 W (EIAJ 7 ohms, T.H.D. 10%), 1.9 W + 1.9 W (DIN 1% Rated Power) / Power requirements — DC 12 V using eight size C (R14) batteries, AC 110 - 120 V/220 - 240 V switchable, 50/60 Hz / Power consumption — 14 W / Dimensions — 420 (W) × 185 (H) × 250 (D) mm / Weight — 3.45 kg (excluding batteries)

- Design and specifications are subject to change without notice.

## K, EZ MODELS

### Tuner section

Frequency range, antenna — FM: 87.5 - 108.0 MHz Rod antenna,  
MW: 530 - 1,605 kHz Ferrite bar antenna, LW: 150 - 285 kHz Ferrite bar antenna

### Deck section

Track format — 4 tracks, 2 channels / Frequency range — Normal tape:  
50 - 12,500 Hz (EIAJ) / Recording system — AC bias / Erasing system — Magnet erase / Heads — Recording/playback head (1), Erasure head (1)

### CD player section

Disc — Compact disc / Scanning method — Non-contact optical scanner  
(semiconductor laser)

### General

Speaker — 100 mm cone type (2) / Output — Headphones jack (stereo mini-jack) / Power output — 2.5 W + 2.5 W (EIAJ 7 ohms, T.H.D. 10% DC), 1.9 W + 1.9 W (DIN 1% Rated Power) / Power requirements — DC 12 V using eight size C (R14) batteries, AC 230 V, 50 Hz / Power consumption — 14 W / Dimensions — 420 (W) × 185 (H) × 250 (D) mm / Weight — 3.45 kg (excluding batteries)

- Design and specifications are subject to change without notice.

## HA MODEL

### Tuner section

Frequency range, antenna — FM: 87.5 - 108.0 MHz Rod antenna,  
AM: 530 - 1,710 kHz Ferrite bar antenna

### Deck section

Track format — 4 tracks, 2 channels / Frequency range — Normal tape:  
50 - 12,500 Hz (EIAJ) / Recording system — AC bias / Erasing system  
— Magnet erase / Heads — Recording/playback head (1), Erasure head (1)

### CD player section

Disc — Compact disc / Scanning method — Non-contact optical scanner (semiconductor laser)

### General

Speaker — 100 mm cone type (2) / Output — Headphones jack (stereo mini-jack) / Power output — 2.5 W + 2.5 W (EIAJ 7 ohms, T.H.D. 10%), 1.9 W + 1.9 W (DIN 1% Rated Power) / Power requirements — DC 12 V using eight size C (R14) batteries, AC 110 - 120 V/220 - 240 V switchable, 50/60 Hz / Power consumption — 14 W / Dimensions — 420 (W) × 185 (H) × 250 (D) mm / Weight — 3.45 kg (excluding batteries)

- Design and specifications are subject to change without notice.

## U MODEL

### Tuner section

Frequency range, antenna — FM: 87.5 - 108.0 MHz Rod antenna,  
AM: 530 - 1,710 kHz Ferrite bar antenna

### Deck section

Track format — 4 tracks, 2 channels / Frequency range — Normal tape:  
50 - 12,500 Hz (EIAJ) / Recording system — AC bias / Erasing system — Magnet erase / Heads — Recording/playback head (1), Erasure head (1)

### CD player section

Disc — Compact disc / Scanning method — Non-contact optical scanner (semiconductor laser)

### General

Speaker — 100 mm cone type (2) / Output — Headphones jack (stereo mini-jack) / Power output — 2.5 W + 2.5 W (EIAJ 7 ohms, T.H.D. 10%) / Power requirements — DC 12 V using eight size C (R14) batteries, AC 120 V, 60 Hz / Power consumption — 15 W / Dimensions — 420 (W) × 185 (H) × 250 (D) mm (16<sup>5</sup>/<sub>8</sub> × 7<sup>3</sup>/<sub>8</sub> × 9<sup>7</sup>/<sub>8</sub> in.) / Weight — 3.45 kg (7 lbs. 10 oz.) (excluding batteries)

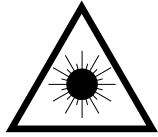
- Design and specifications are subject to change without notice.

## PROTECTION OF EYES FROM LASER BEAM DURING SERVICING

This set employs laser. Therefore, be sure to follow carefully the instructions below when servicing.

### WARNING!

WHEN SERVICING, DO NOT APPROACH THE LASER EXIT WITH THE EYE TOO CLOSELY. IN CASE IT IS NECESSARY TO CONFIRM LASER BEAM EMISSION. BE SURE TO OBSERVE FROM A DISTANCE OF MORE THAN 30cm FROM THE SURFACE OF THE OBJECTIVE LENS ON THE OPTICAL PICK-UP BLOCK.



- Caution: Invisible laser radiation when open and interlocks defeated avoid exposure to beam.
- Advarsel: Usynlig laserstråling ved åbning, når sikkerhedsafbrydere er ude af funktion. Undgå udsættelse for stråling.

### VAROITUS!

Laiteen Käyttäminen muulla kuin tässä käyttöohjeessa mainitulla tavalla saattaa altistaa käyttäjän turvallisuusluokan 1 ylitävälle näkymättömälle lasersäteilylle.

### VARNING!

Om apparaten används på annat sätt än vad som specificeras i denna bruksanvisning, kan användaren utsättas för osynlig laserstrålning, som överskrider gränsen för laserklass 1.

### CAUTION

Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

### ATTENTION

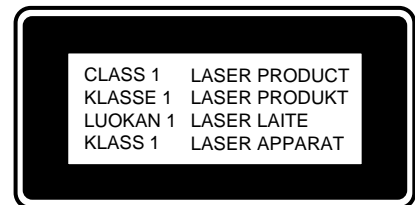
L'utilisation de commandes, réglages ou procédures autres que ceux spécifiés peut entraîner une dangereuse exposition aux radiations.

### ADVARSEL!

Usynlig laserstråling ved åbning, når sikkerhedsafbrydere er ude af funktion. Undgå udsættelse for stråling.

This Compact Disc player is classified as a CLASS 1 LASER product.

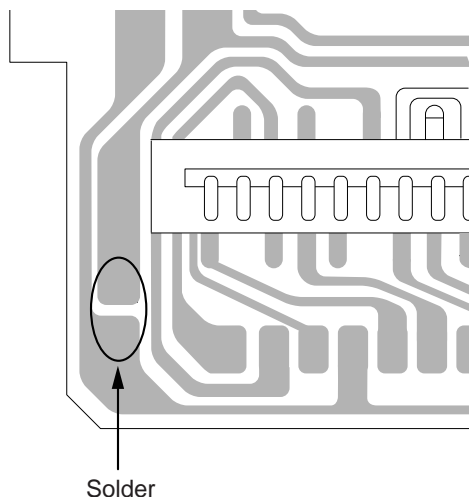
The CLASS 1 LASER PRODUCT label is located on the rear exterior.



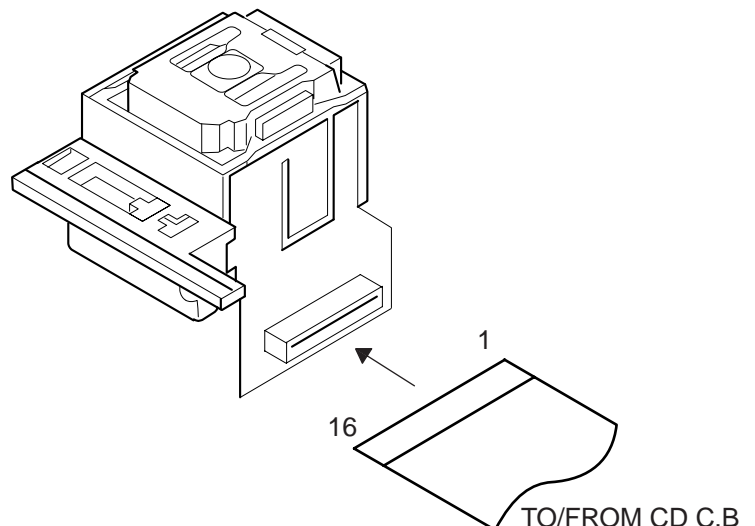
## Precaution to replace Optical block (SF-P101NR)

Body or clothes electrostatic potential could ruin laser diode in the optical block. Be sure ground body and workbench, and use care the clothes do not touch the diode.

- 1) After the connection, remove solder shown in the right figure.



PICK UP ASSY  
SF-P101NR



# ELECTRICAL MAIN PARTS LIST

DESCRIPTIONで判断できない物は "REFERENCE NAME LIST" を参照してください。  
If can't understand for Description please kindly refer to "REFERENCE NAME LIST".

REF. NO	PART NO.	KANRI NO.	DESCRIPTION	REF. NO	PART NO.	KANRI NO.	DESCRIPTION
IC				C247	87-010-401-080		CAP, ELECT 1-50V
				C248	87-010-401-080		CAP, ELECT 1-50V
				C310	87-010-248-080		CAP, ELECT 220-10V
				C316	87-010-263-080		CAP, ELECT 100-10V
				C317	87-015-819-080		CAPACITOR, 0.01
	87-A20-955-010	IC, LA1828		C322	87-010-260-080		CAP, ELECT 47-25V
	87-A21-064-010	IC, LA4227		C483	87-012-156-080		C-CAP, S 220P-50 CH
	87-A21-520-040	C-IC, M61509FP		C484	87-012-156-080		C-CAP, S 220P-50 CH
	<110HRJ(S), 110EZ(S), 110EZ(L), 170U(S), 170K(S), 170HA(S)>	C-IC, M62495AFP		C801	87-010-248-080		CAP, ELECT 220-10V
	<EXCEPT 110HRJ(S), 110EZ(S), 110EZ(L), 170U(S), 170K(S), 170HA(S)>	C-IC, LA9241ML		C805	87-012-365-080		C-CAP, S 0.027-25VBK
	87-A20-459-010	C-IC, LC78622ED		C806	87-012-365-080		C-CAP, S 0.027-25VBK
	87-A21-093-010	IC, LA6541D		C807	87-010-405-080		CAP, ELECT 10-50V
	8A-CD9-610-010	C-IC, LC865516A-5P16		C808	87-010-405-080		CAP, ELECT 10-50V
	87-A20-650-010	IC, RPM6938-V11		C809	87-010-401-080		CAP, ELECT 1-50V
		<170U(S), 170K(S), 170HA(S)>		C810	87-010-401-080		CAP, ELECT 1-50V
	87-A21-607-010	IC, NJM14558LD		C811	87-010-178-080		CHIP CAP 1000P
TRANSISTOR				C812	87-010-178-080		CHIP CAP 1000P
				C816	87-010-180-080		C-CER 1500P
				C817	87-010-180-080		C-CER 1500P
				C821	87-010-401-080		CAP, ELECT 1-50V
	89-327-143-080	TR, 2SC2714 (0.1W)		C822	87-010-401-080		CAP, ELECT 1-50V
	87-026-447-080	TR, 2SC1740S R		C823	87-010-178-080		CHIP CAP 1000P
	87-026-463-080	TR, 2SA933S (0.3W)		C824	87-010-178-080		CHIP CAP 1000P
	87-026-213-080	CHIP-TR, DTC114YK		C829	87-010-178-080		CHIP CAP 1000P
	89-318-154-080	TR, 2SC1815 (0.4W)		C830	87-010-178-080		CHIP CAP 1000P
	89-112-965-080	TR, 2SA1296 (0.75W)		C833	87-018-195-080		CAP, CER 1200P-16V
	87-026-291-080	TR, DTC124XS		C834	87-010-248-080		CAP, ELECT 220-10V
	89-213-702-010	TR, 2SB1370 (1.8W)		C843	87-010-197-080		CAP, CHIP 0.01 DM
	87-026-462-080	TR, 2SC1740 S(RS 0.3W)		C844	87-018-124-080		CAP, CER 270P-50V
	89-109-332-380	TR, 2SA933RS		C845	87-010-178-080		CHIP CAP 1000P
	89-113-187-080	TR, 2SA1318TU		C846	87-010-263-080		CAP, ELECT 100-10V
	87-026-295-080	TR, DTC144TK		C851	87-010-186-080		CAP, CHIP 4700P
	89-317-403-080	TR, 2SC1740S		C852	87-010-178-080		CHIP CAP 1000P
	87-026-239-080	TR, DTC114TK (0.2W)		C853	87-A11-132-080		CAP, TC U 0.01-50 K B
	87-026-237-080	CHIP-TR, DTC124XK		CN201	87-099-018-010		CONN, 16P
		<170U(S), 170K(S), 170HA(S)>		CN801	87-A60-110-010		CONN, 4P V S2M-4W
	87-026-464-080	TR, DTC114TS (0.3W)		CNA302	8A-CDA-629-010		CONN ASSY, 6P MA-TU
DIODE				L801	87-007-342-010		COIL, OSC 85K BIAS
				SW801	8Z-CD9-609-010		SW, SL 1-6-2 PS62D01
	87-020-465-080	DIODE, 1SS133 (110MA)		CD C.B			
	87-A40-128-080	C-VARI-CAP, HVU202A		C30	87-010-260-080		CAP, ELECT 47-25V
	87-A40-650-080	ZENER, MTZJ6.8A		C251	87-010-404-080		CAP, ELECT 4.7-50V
	87-070-345-080	DIODE, IN4148		C261	87-010-402-080		CAP, ELECT 2.2-50V
	87-A40-648-080	ZENER, MTZJ8.2A		C262	87-010-402-080		CAP, ELECT 2.2-50V
	87-A40-234-080	ZENER, MTZJ5.6A		C263	87-010-178-080		CHIP CAP 1000P
	87-017-978-080	DIODE, IN4003		C264	87-010-178-080		CHIP CAP 1000P
	87-017-932-080	ZENER, MTJ6.2B		C265	87-010-263-080		CAP, ELECT 100-10V
	87-A40-465-010	DIODE, FR202		C266	87-010-263-080		CAP, ELECT 100-10V
MAIN C.B				C267	87-010-112-080		CAP, ELECT 100-16V
				C268	87-010-112-080		CAP, ELECT 100-16V
	C211	87-A11-177-080	C-CAP, S 0.15-16 K B	C271	87-010-237-080		CAP, ELECT 1000-16V
	C212	87-A11-177-080	C-CAP, S 0.15-16 K B	C272	87-010-237-080		CAP, ELECT 1000-16V
	C215	87-016-460-080	C-CAP, S 0.22-16 B	C278	87-010-405-080		CAP, ELECT 10-50V
	C216	87-016-460-080	C-CAP, S 0.22-16 B	C279	87-010-385-080		CAP, ELECT 220-25V
	C231	87-010-213-080	C-CAP, S 0.015-50 B	C301	87-016-495-000		CAP, E 3300-25 M SMG
	C232	87-010-213-080	C-CAP, S 0.015-50 B	C306	87-010-404-080		CAP, ELECT 4.7-50V
	C233	87-A10-201-080	C-CAP, S0.33-16 KB	C307	87-010-401-080		CAP, ELECT 1-50V
	C234	87-A10-201-080	C-CAP, S0.33-16 KB	C308	87-010-221-080		CAP, ELECT 470-10V
	C235	87-016-669-080	C-CAP, S 0.1-25 K B	C311	87-010-374-080		CAP, ELECT 47-10V
	C236	87-016-669-080	C-CAP, S 0.1-25 K B	C312	87-010-385-080		CAP, ELECT 220-25V
	C237	87-010-371-080	CAP, ELECT 470-6.3V	C321	87-010-197-080		CAP, CHIP 0.01 DM
	C239	87-010-197-080	CAP, CHIP 0.01 DM	C322	87-010-263-080		CAP, ELECT 100-10V
	<110HRJ(S), 110EZ(S), 110EZ(L), 170U(S), 170K(S), 170HA(S)>	CAP, S 1-16		C325	87-010-405-080		CAP, ELECT 10-50V
	<EXCEPT 110HRJ(S), 110EZ(S), 110EZ(L), 170U(S), 170K(S), 170HA(S)>	CAP, CHIP 0.01 DM		C401	87-010-403-080		CAP, ELECT 3.3-50V
	C240	<110HRJ(S), 110EZ(S), 110EZ(L), 170U(S), 170K(S), 170HA(S)>		C402	87-010-197-080		CAP, CHIP 0.01 DM
	C240	87-010-805-080	CAP, S 1-16	C403	87-010-263-080		CAP, ELECT 100-10V
	<EXCEPT 110HRJ(S), 110EZ(S), 110EZ(L), 170U(S), 170K(S), 170HA(S)>			C404	87-010-248-080		CAP, ELECT 220-10V
				C405	87-010-197-080		CAP, CHIP 0.01 DM

REF. NO	PART NO.	KANRI NO.	DESCRIPTION	REF. NO	PART NO.	KANRI NO.	DESCRIPTION
C406	87-010-374-080	CAP, ELECT	47-10V	C494	87-010-197-080	CAP, CHIP	0.01 DM
C407	87-010-178-080	CHIP CAP	1000P	C501	87-012-368-080	C-CAP,S	0.1-50 F
C408	87-010-198-080	CAP, CHIP	0.022	C502	87-010-322-080	C-CAP,S	100P-50 CH
C409	87-010-248-080	CAP, ELECT	220-10V	C503	87-010-322-080	C-CAP,S	100P-50 CH
C410	87-010-263-080	CAP, ELECT	100-10V	C504	87-010-322-080	C-CAP,S	100P-50 CH
C411	87-A11-177-080	C-CAP,S	0.15-16 K B	C505	87-010-322-080	C-CAP,S	100P-50 CH
C412	87-010-401-080	CAP, ELECT	1-50V	C506	87-010-322-080	C-CAP,S	100P-50 CH
C413	87-016-369-080	C-CAP,S	0.033-25 B K	C510	87-016-669-080	C-CAP,S	0.1-25 K B
C414	87-010-405-080	CAP, ELECT	10-50V	C831	87-010-198-080	CAP, CHIP	0.022
C416	87-010-545-080	CAP, ELECT	0.22-50V	CN202	8A-CH4-689-010	CONN,3P	V 2.5
C417	87-012-157-080	C-CAP,S	330P-50 CH	CN205	87-A60-109-010	CONN,2P	V S2M-2W
C418	87-010-213-080	C-CAP,S	0.015-50 B	CN301	8A-CH4-689-010	CONN,3P	V 2.5
C419	87-A11-608-080	C-CAP,S	0.33-25 K B	CN401	87-A60-424-010	CONN,16P	V TOC-B
C420	87-016-369-080	C-CAP,S	0.033-25 B K	CN403	87-099-201-010	CONN,8P	6216 H
C421	87-A11-177-080	C-CAP,S	0.15-16 K B	CN802	8A-CH4-687-010	CONN,4P	V 2.5
C422	87-010-184-080	CHIP CAPACITOR	3300P(K)	CNA402	8A-CDA-625-010	CONN ASSY,6P	CD-ME
C423	87-010-992-080	C-CAP,S	0.047-25 B	L401	87-003-102-080	COIL, 10UH	
C425	87-010-176-080	C-CAP,S	680P-50 SL	L404	87-003-152-080	COIL, 100UH	
C426	87-A11-608-080	C-CAP,S	0.33-25 K B	△R840	87-029-124-010	RES,FUSE	2.2-1/4
C428	87-010-197-080	CAP, CHIP	0.01 DM	SFR430	87-024-437-080	SFR100K,RH063EC	
C429	87-010-186-080	CAP,CHIP	4700P	X401	8Z-CD5-633-010	VIB, CER16.93MHZ	FCR16.93M2
C430	87-012-156-080	C-CAP,S	220P-50 CH	FRONT C.B			
C431	87-010-545-080	CAP, ELECT	0.22-50V				
C432	87-010-374-080	CAP, ELECT	47-10V				
C433	87-010-401-080	CAP, ELECT	1-50V				
C434	87-010-184-080	CHIP CAPACITOR	3300P(K)				
C435	87-010-197-080	CAP, CHIP	0.01 DM	C601	87-010-313-080	CAP, CHIP	18P
C436	87-010-374-080	CAP, ELECT	47-10V	C602	87-010-315-080	C-CAP,S	27P-50 CH
C437	87-010-404-080	CAP, ELECT	4.7-50V	C603	87-010-319-080	C-CAP,S	56P-50 CH
C438	87-016-669-080	C-CAP,S	0.1-25 K B	C604	87-010-317-010	CHIP CAP,S	39P CH
C439	87-010-178-080	CHIP CAP	1000P	C605	87-010-216-040	CAP,E	100-10 5L
C440	87-010-145-080	C-CAP,S	1P-50 CH	C606	87-012-368-080	C-CAP,S	0.1-50 F
C441	87-010-197-080	CAP, CHIP	0.01 DM	C607	87-015-779-010	CHIP CAPACITOR, 0.01	
C442	87-010-313-080	CAP, CHIP	18P	C608	87-010-415-080	CAP ELE SRE	10-50V
C445	87-012-368-080	C-CAP,S	0.1-50 F	C609	87-010-493-080	CAP,E	0.47-50 GAS
C446	87-012-368-080	C-CAP,S	0.1-50 F	C610	87-010-178-080	CHIP CAP	1000P
C447	87-012-368-080	C-CAP,S	0.1-50 F	C611	87-A10-189-040	CAP,E	220-10
C448	87-010-315-080	C-CAP,S	27P-50 CH	C612	87-010-415-080	CAP ELE SRE	10-50V
C450	87-012-140-080	CAP	470P	C613	87-012-368-080	C-CAP,S	0.1-50 F
C451	87-012-156-080	C-CAP,S	220P-50 CH	C614	87-010-312-080	C-CAP,S	15P-50 CH
C455	87-010-247-080	CAP, ELECT	100-50V	C627	87-015-779-010	CHIP CAPACITOR, 0.01	
C457	87-010-312-080	C-CAP,S	15P-50 CH	C628	87-015-779-010	CHIP CAPACITOR, 0.01	
C458	87-010-312-080	C-CAP,S	15P-50 CH	C629	87-015-779-010	CHIP CAPACITOR, 0.01	
C459	87-010-263-080	CAP, ELECT	100-10V	C630	87-010-264-040	CAP,E	100-10 5L
C460	87-015-819-080	CAPACITOR,0.01		C631	87-015-779-010	CHIP CAPACITOR, 0.01	
C461	87-010-197-080	CAP, CHIP	0.01 DM	CN601	87-099-757-010	CONN,16P	9604S F
C462	87-010-248-080	CAP, ELECT	220-10V	CN602	87-A60-079-010	CONN,08P	H 9604S-08F
C463	87-010-197-080	CAP, CHIP	0.01 DM	CNA604	8A-CDA-623-010	CONN ASSY,7P	KEY
C465	87-010-404-080	CAP, ELECT	4.7-50V	JW603	87-008-372-080	FILTER, EMI	BL OIRNI
C466	87-012-368-080	C-CAP,S	0.1-50 F	JW605	87-003-097-080	COIL,1UH	
C467	87-010-263-080	CAP, ELECT	100-10V	JW606	87-003-097-080	COIL,1UH	
C469	87-012-154-080	C-CAP,S	150P-50 CH	JW608	87-003-097-080	COIL,1UH	
C470	87-010-544-080	CAP, ELECT	0.1-50V	JW627	87-008-372-080	FILTER, EMI	BL OIRNI
C471	87-015-785-080	CHIP CAPACITOR, 0.1FZ-25Z		JW633	87-003-098-080	COIL,2.2UH	
C472	87-015-785-080	CHIP CAPACITOR, 0.1FZ-25Z		L601	87-003-098-080	COIL,2.2UH	
C473	87-015-785-080	CHIP CAPACITOR, 0.1FZ-25Z		LED602	88-CD6-630-010	LED,934ID	RED
C474	87-015-785-080	CHIP CAPACITOR, 0.1FZ-25Z		LED608	88-CD6-630-010	LED,934ID	RED
C475	87-010-197-080	CAP, CHIP	0.01 DM	LED610	88-CD6-631-010	LED,934GD	GRN
C476	87-010-236-080	CAP,E	1000-10 SME	<110HRJ(S),110EZ(S),110EZ(L),170U(S),170K(S),170HA(S)>			
C477	87-010-197-080	CAP, CHIP	0.01 DM	LED611	87-CD8-616-010	LED,SA36-11	HWA-11.0
C478	87-010-263-080	CAP, ELECT	100-10V	S601	87-A91-704-080	SW,TACT	EVQ 214 05R
C479	87-010-197-080	CAP, CHIP	0.01 DM	S602	87-A91-704-080	SW,TACT	EVQ 214 05R
C480	87-010-221-080	CAP, ELECT	470-10V	S603	87-A91-704-080	SW,TACT	EVQ 214 05R
C481	87-010-405-080	CAP, ELECT	10-50V	S604	87-A91-704-080	SW,TACT	EVQ 214 05R
C482	87-010-405-080	CAP, ELECT	10-50V	S605	87-A91-704-080	SW,TACT	EVQ 214 05R
C489	87-012-368-080	C-CAP,S	0.1-50 F	S609	87-A91-704-080	SW,TACT	EVQ 214 05R
C490	87-012-368-080	C-CAP,S	0.1-50 F	<110HRJ(S),110EZ(S),110EZ(L),170U(S),170K(S),170HA(S)>			
C491	87-010-197-080	CAP, CHIP	0.01 DM	S611	87-A91-704-080	SW,TACT	EVQ 214 05R
C492	87-010-221-080	CAP, ELECT	470-10V	X601	87-030-273-010	VIB,XTAL	32.768K5PPM
C493	87-010-180-080	C-CER	1500P<170U(S)>	X602	87-030-376-080	VIB,CER	CSA5.76MG200

REF. NO	PART NO.	KANRI NO.	DESCRIPTION
TUNER C.B			
C1	87-010-314-080	C-CAP,S 22P-50V	
C2	87-010-316-080	C-CAP,S 33P-50 CH	
C3	87-010-314-080	C-CAP,S 22P-50V	
C4	87-010-148-080	CAP, CHIP S 4P SL	
C5	87-010-378-080	<110HRJ(S),100HRJ(S),170U(S),170HA(S)> CAP, ELECT 10-16V	
C7	87-012-156-080	C-CAP,S 220P-50 CH	
C8	87-010-197-080	CAP, CHIP 0.01 DM	
C9	87-010-311-080	CAP 12P	
C10	87-010-197-080	CAP, CHIP 0.01 DM	
C11	87-010-152-080	C-CAP,S 8P-50 CH	
C12	87-010-314-080	C-CAP,S 22P-50V	
C13	87-010-322-080	C-CAP,S 100P-50 CH	
C14	87-010-148-080	CAP, CHIP S 4P SL	
C15	87-016-669-080	C-CAP,S 0.1-25 K B	
C16	87-010-178-080	CHIP CAP 1000P	
C17	87-016-669-080	C-CAP,S 0.1-25 K B	
C18	87-010-198-080	CAP, CHIP 0.022	
C19	87-016-669-080	C-CAP,S 0.1-25 K B	
C20	87-010-400-080	CAP, ELECT 0.47-50V	
C21	87-010-403-080	CAP, ELECT 3.3-50V	
C22	87-010-197-080	CAP, CHIP 0.01 DM	
C24	87-010-197-080	CAP, CHIP 0.01 DM	
C25	87-010-197-080	CAP, CHIP 0.01 DM	
C26	87-012-358-080	C-CAP,S 0.47-10 F Z	
C27	87-012-358-080	C-CAP,S 0.47-10 F Z	
C28	87-010-992-080	C-CAP,S 0.047-25 B	
C29	87-010-992-080	C-CAP,S 0.047-25 B	
C30	87-010-248-080	CAP, ELECT 220-10V	
C31	87-010-379-080	CAP, ELECT 22-16V	
C32	87-010-197-080	CAP, CHIP 0.01 DM	
C33	87-010-197-080	CAP, CHIP 0.01 DM	
C34	87-010-197-080	CAP, CHIP 0.01 DM	
C35	87-010-197-080	CAP, CHIP 0.01 DM	
C36	87-010-263-080	CAP, ELECT 100-10V	
C37	87-010-197-080	CAP, CHIP 0.01 DM	
C38	87-010-197-080	CAP, CHIP 0.01 DM	
C39	87-010-197-080	CAP, CHIP 0.01 DM	
C40	87-010-150-080	<110HRJ(S),100HRJ(S),170U(S),170HA(S)> C-CAP,S 6P-50 CH	
C41	87-010-321-080	<EXCEPT 110HRJ(S),100HRJ(S),170U(S),170HA(S)> CHIP CAPACITOR,82P(J)	
C42	87-010-150-080	<EXCEPT 110HRJ(S),100HRJ(S),170U(S),170HA(S)> C-CAP,S 6P-50 CH	
C44	87-012-140-080	<EXCEPT 110HRJ(S),100HRJ(S),170U(S),170HA(S)> CAP 470P	
C51	87-010-197-080	CAP, CHIP 0.01 DM	
C56	87-010-152-080	C-CAP,S 8P-50 CH	
CF1	87-A90-128-010	<110HRJ(S),100HRJ(S),170U(S),170HA(S)> FLTR,AM IF CFAL-455	
CF2	87-008-261-010	FILTER, SFE10.7MA5-A	
CF3	87-008-261-010	FILTER, SFE10.7MA5-A	
CN2	87-A60-116-010	CONN,6P H S2M-6WR	
L2	87-A50-560-010	COIL,FM BPF(ACD)	
L3	8A-CD9-660-010	BAR-ANT,MW 2B-ACD(COI)	
L3	8A-CD9-661-010	<110HRJ(S),100HRJ(S),170U(S),170HA(S)> BAR-ANT,MW/LW 3B-ACD(COI)	
L4	87-A50-562-010	<EXCEPT 110HRJ(S),100HRJ(S),170U(S),170HA(S)> COIL,FM RF EX(ACD)	
L5	87-A50-564-010	COIL,FM OSC EX(ACD)	
L6	87-A50-337-010	COIL,AM OSC (TOKO)	
L7	87-A50-579-010	<110HRJ(S),100HRJ(S),170U(S),170HA(S)> COIL,AM IFT(ACD)	
L8	87-A50-335-010	COIL,FM IFT (TOKO)	
L9	87-A50-577-010	COIL,FM DET(ACD)	
L10	87-005-849-080	COIL,10UH(CECS)	
L16	87-A50-569-010	COIL,LW OSC-ACD(COI)	
		<EXCEPT 110HRJ(S),100HRJ(S),170U(S),170HA(S)>	

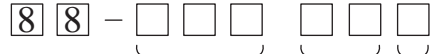
REF. NO	PART NO.	KANRI NO.	DESCRIPTION
L17	87-A50-337-010		COIL,AM OSC (TOKO)
S1	87-A91-548-010	<EXCEPT 110HRJ(S),100HRJ(S),170U(S),170HA(S)> SW,SL-2-3 SK23E01G06	
S1	87-A91-549-010	<110HRJ(S),100HRJ(S),170U(S),170HA(S)> SW,SL-6-4 SK64D01G06	
TC5	87-011-253-080	<EXCEPT 110HRJ(S),100HRJ(S),170U(S),170HA(S)> TRIMER,30P LAR	
TC6	87-011-253-080	<EXCEPT 110HRJ(S),100HRJ(S),170U(S),170HA(S)> TRIMER,30P LAR	
VC1	87-A91-635-010	<EXCEPT 110HRJ(S),100HRJ(S),170U(S),170HA(S)> TUN-CAP,20P-140P E-ACD(MITSUMI)	
VC1	87-A91-167-010	TUN-CAP,20P-160P FA-22125 N000	
VC1	87-A91-170-010	<170U(S),170HA(S)> TUN-CAP,20P-335P FA-2217 N000- <100HE(S)>	
HP C.B			
CN204	87-A60-685-010	CONN,4P H WHT EH	
CN605	87-A60-117-010	CONN,7P H S2M-7WR	
CNA203	8A-CDA-628-010	CONN ASSY,4P MA-HP	
J251	87-A60-569-010	JACK,HTJ-035-18	
LED606	88-CD6-630-010	LED,934ID RED	
LED607	88-CD6-630-010	LED,934ID RED	
S606	87-A91-704-080	SW,TACT EVQ 214 05R	
S607	87-A91-704-080	SW,TACT EVQ 214 05R	
S608	87-A91-704-080	SW,TACT EVQ 214 05R	
S614	87-A91-704-080	SW,TACT EVQ 214 05R	
S615	87-A91-704-080	SW,TACT EVQ 214 05R	
BATT1 C.B			
C901	87-010-192-080	C-CAP,S 0.022-50 F	
C902	87-010-192-080	C-CAP,S 0.022-50 F	
C903	87-010-192-080	C-CAP,S 0.022-50 F	
C904	87-010-192-080	C-CAP,S 0.022-50 F	
CNA901	8A-CDA-627-010	CONN ASSY,3P PWR	
△PR901	87-A90-092-080	PROTECTOR,2.5A 491	
SP901	87-CD6-213-010	SPR-C,BATT (-)	
SP902	87-CD6-213-010	SPR-C,BATT (-)	
BATT2 C.B			
SP903	87-CD6-213-010	SPR-C,BATT (-)	
SP904	87-CD6-213-010	SPR-C,BATT (-)	
MOTOR C.B			
M2	9X-262-576-910	MOTOR GEAR ASSY	
PIN3	91-564-722-110	CONNECTOR 6P	
SW1	91-572-085-120	LEAF SW	
VOL SEL C.B<170HA(S)>			
△F901	87-035-347-010	FUSE, 2.5A 250V T<170HA(S)>	
FC901	87-033-213-010	CLAMP, FUSE SMK<170HA(S)>	
FC902	87-033-213-010	CLAMP, FUSE SMK<170HA(S)>	

- Regarding connectors, they are not stocked as they are not the initial order items.  
The connectors are available after they are supplied from connector manufacturers upon the order is received.

○チップ抵抗部品コード／CHIP RESISTOR PART CODE

チップ抵抗部品コードの成り立ち

Chip Resistor Part Coding



A  
抵抗部品コード  
Resistor Code

桁表示  
Figure

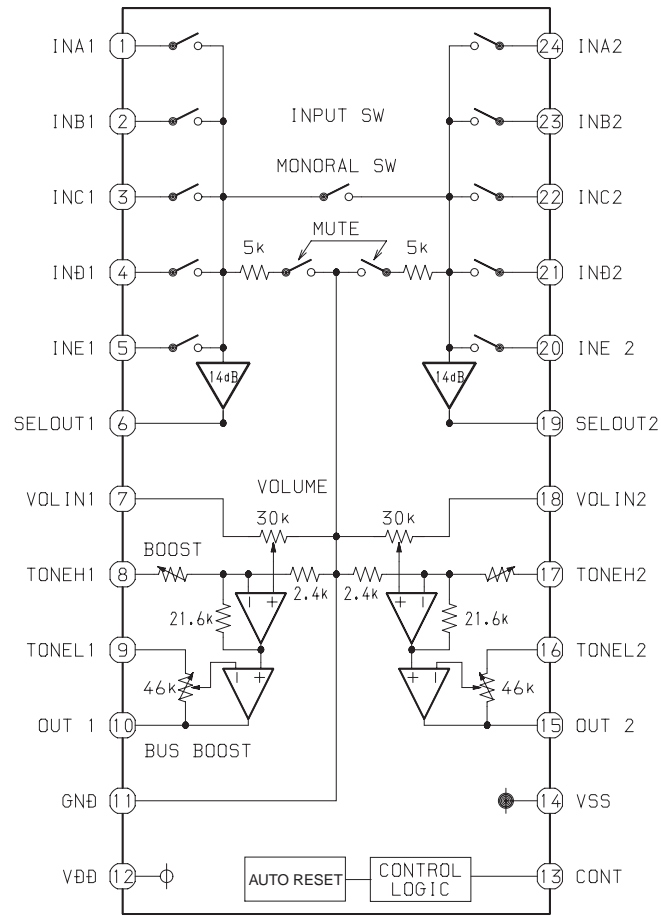
抵抗値  
Value of resistor

チップ抵抗  
Chip resistor

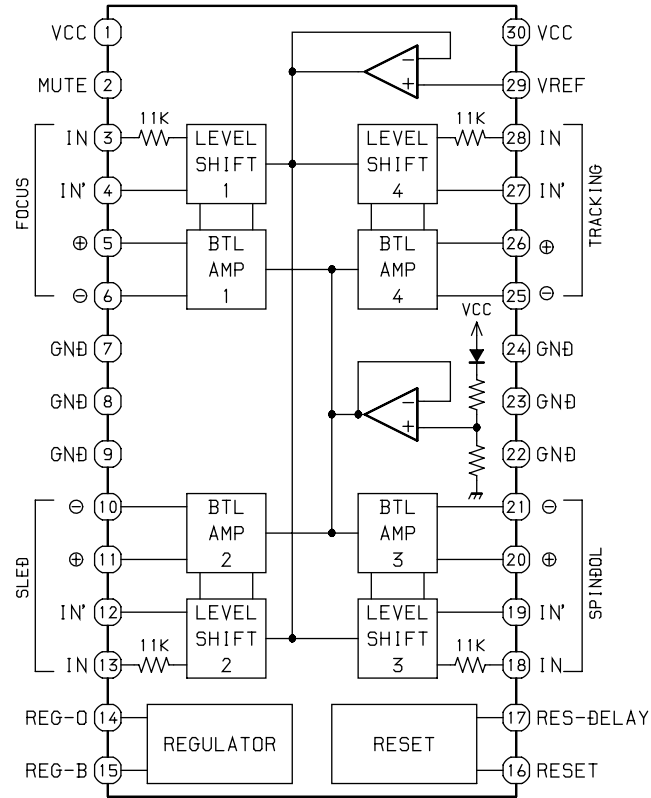
容量 Wattage	種類 Type	許容誤差 Tolerance	記号 Symbol	寸法／Dimensions (mm)				抵抗コード Resistor Code : A
				外形／Form	L	W	t	
1/16W	1005	± 5%	CJ		1.0	0.5	0.35	104
1/16W	1608	± 5%	CJ		1.6	0.8	0.45	108
1/10W	2125	± 5%	CJ		2	1.25	0.45	118
1/8W	3216	± 5%	CJ		3.2	1.6	0.55	128

## IC BLOCK DIAGRAM

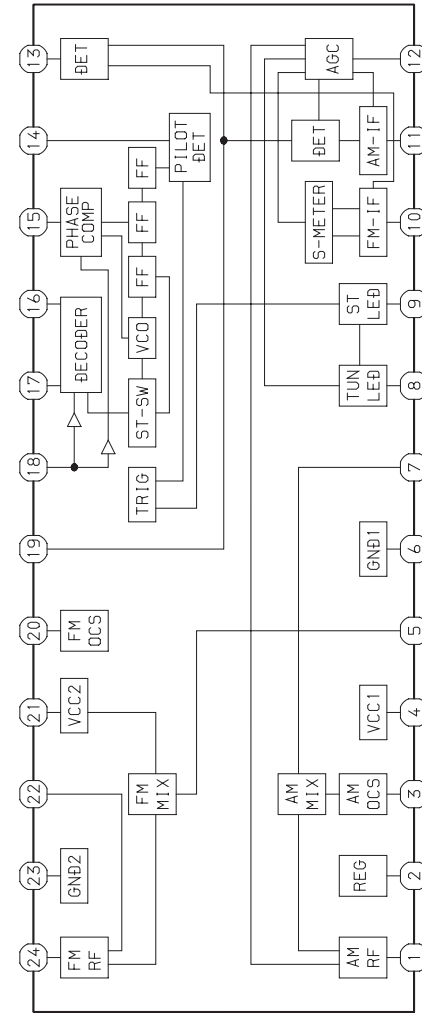
### IC, M62495AFP



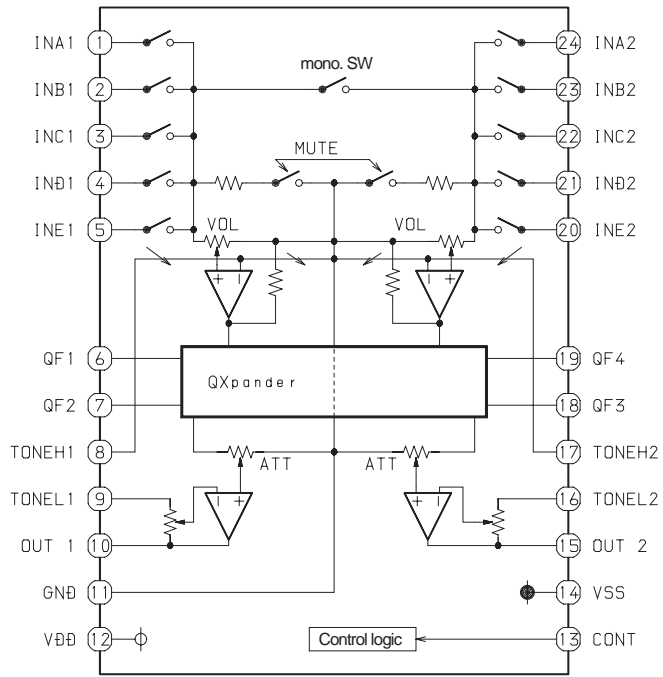
### IC, LA6541D



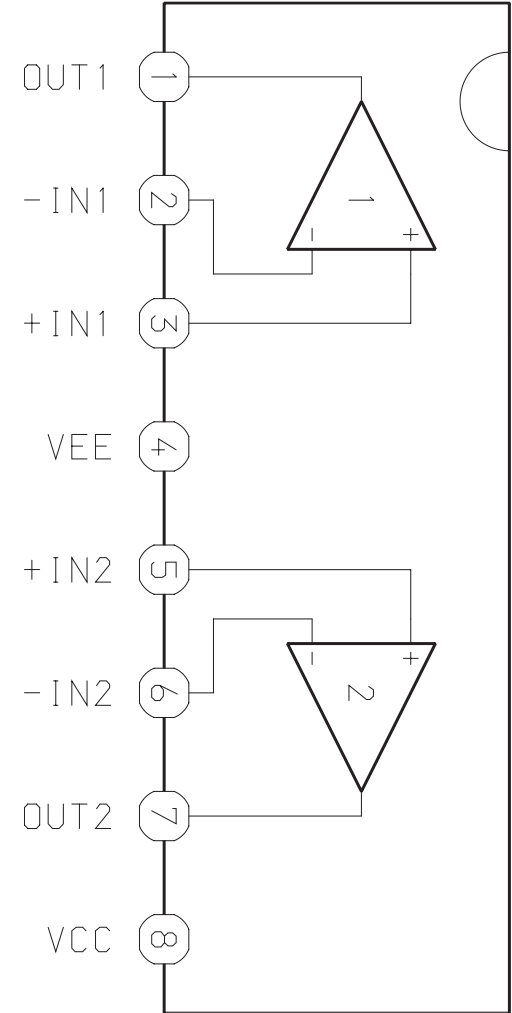
### IC, LA1828



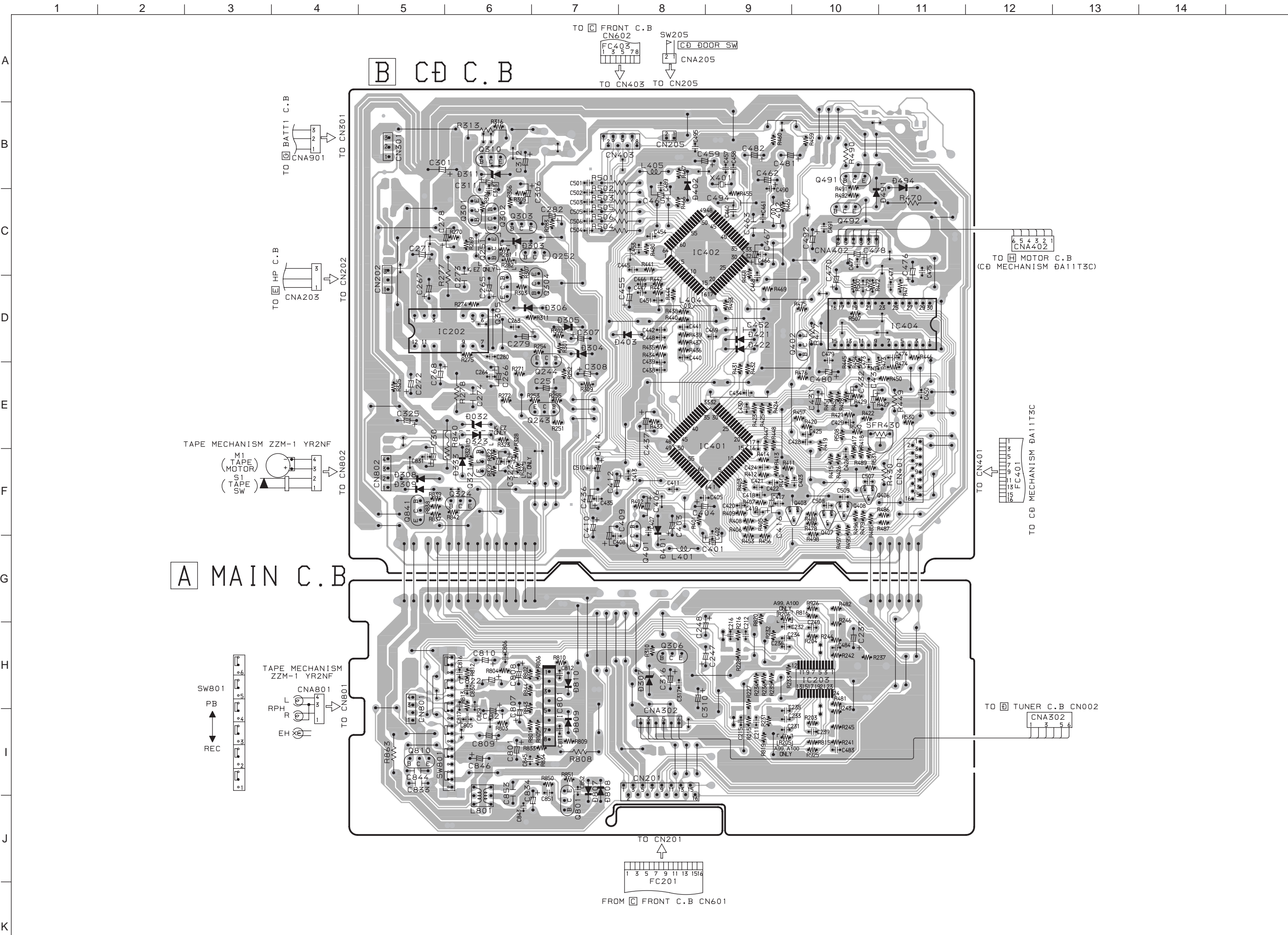
### IC, M61509FP



### IC, BA4560N

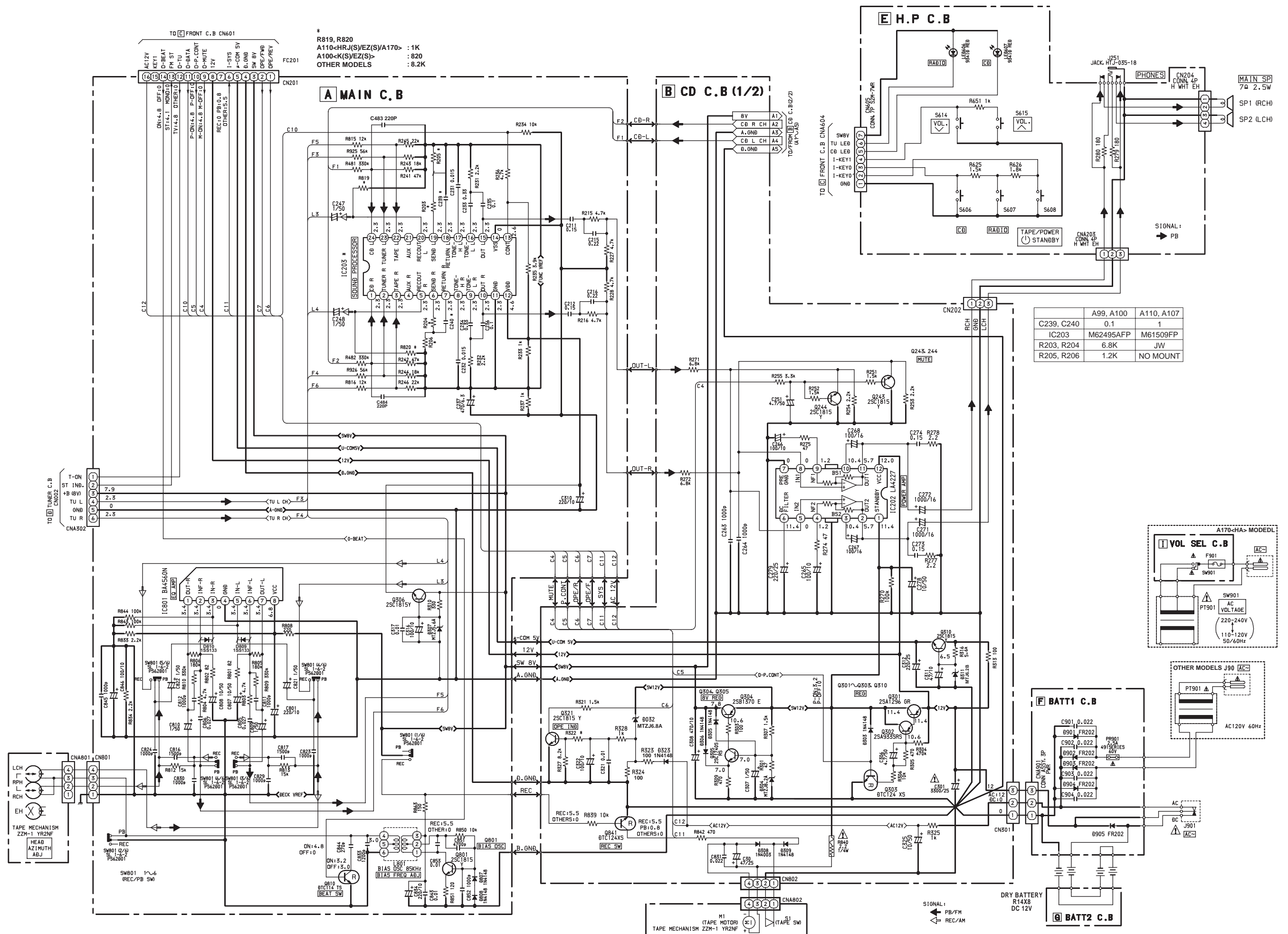


WIRING-1 (MAIN/CD)

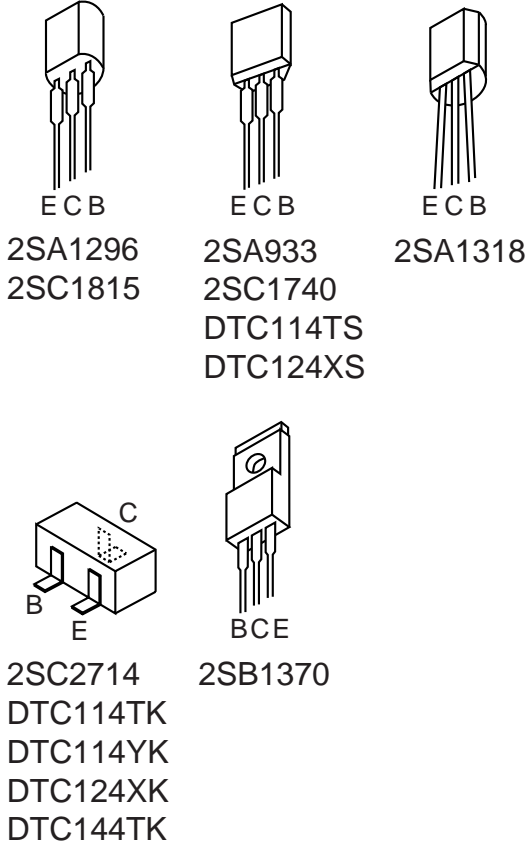
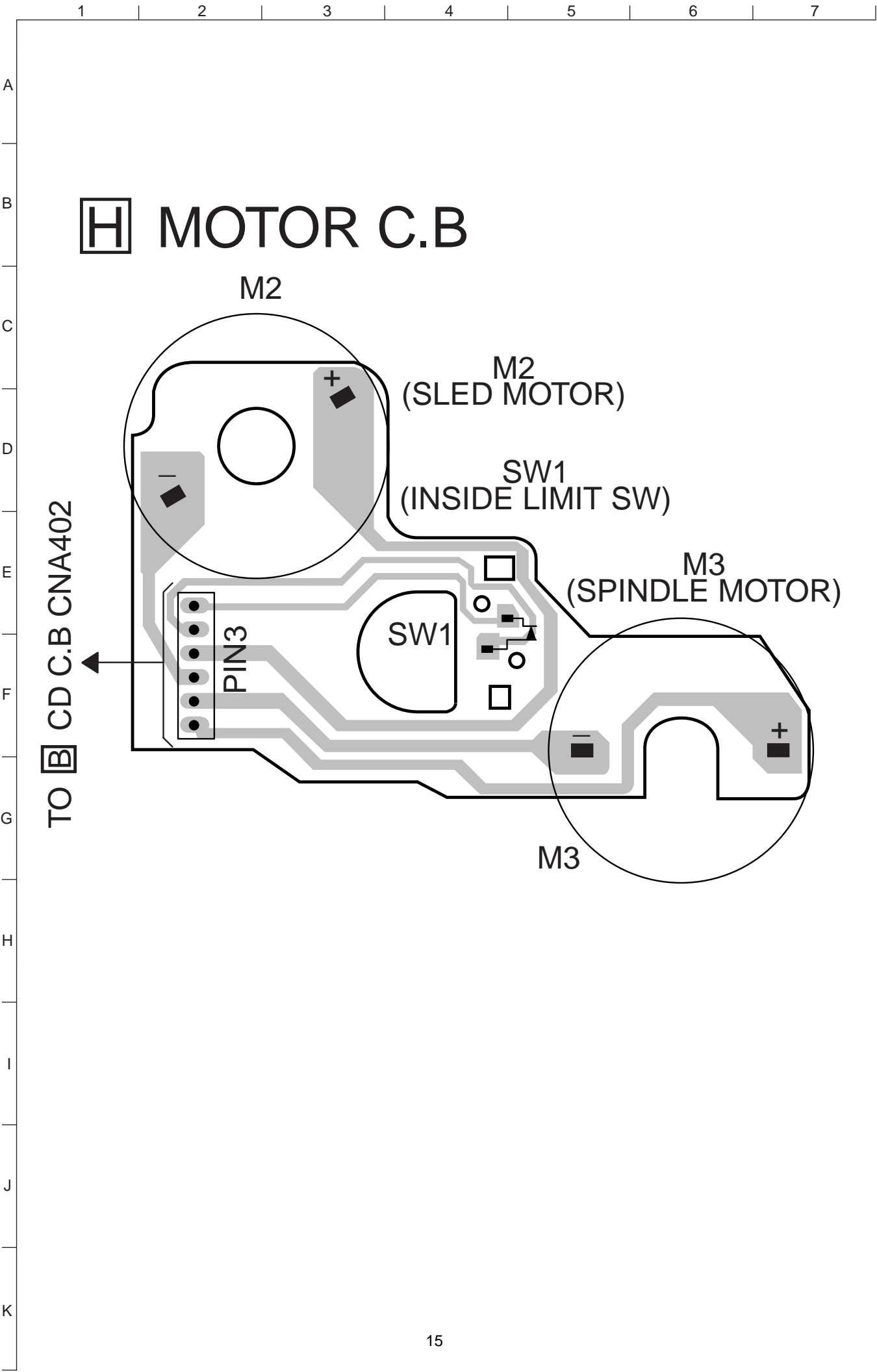


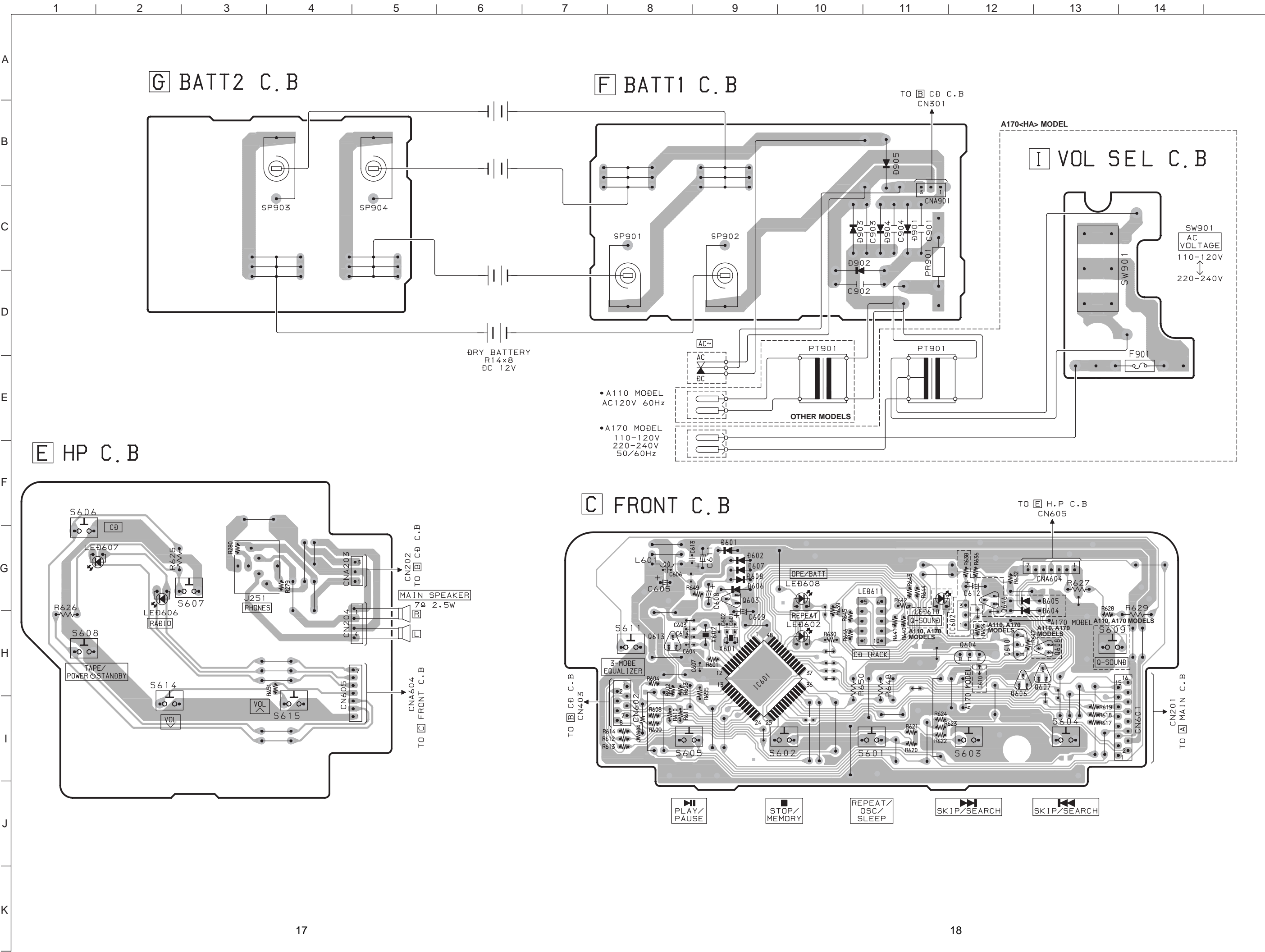


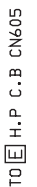
SCHEMATIC DIAGRAM-1 (MAIN)





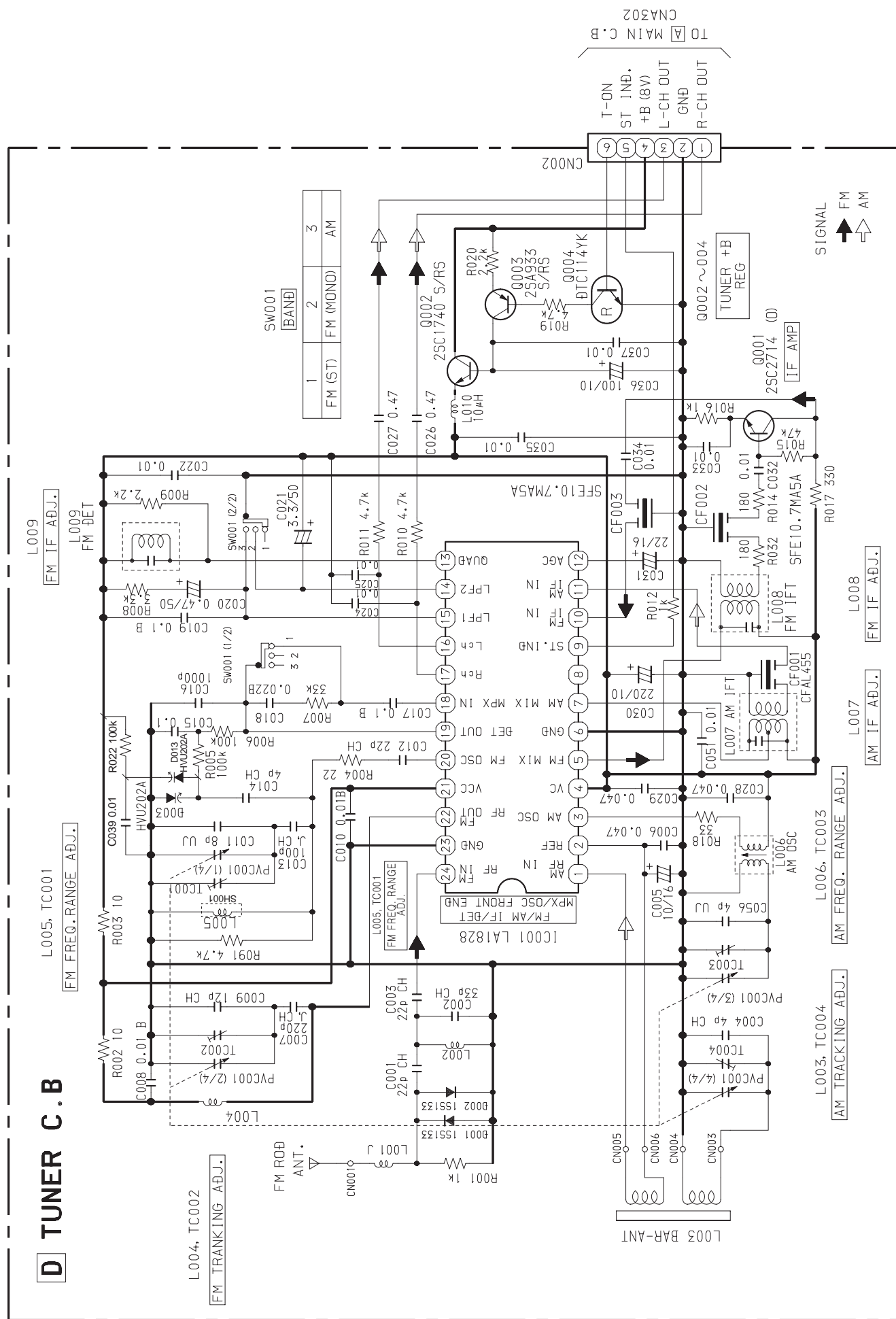




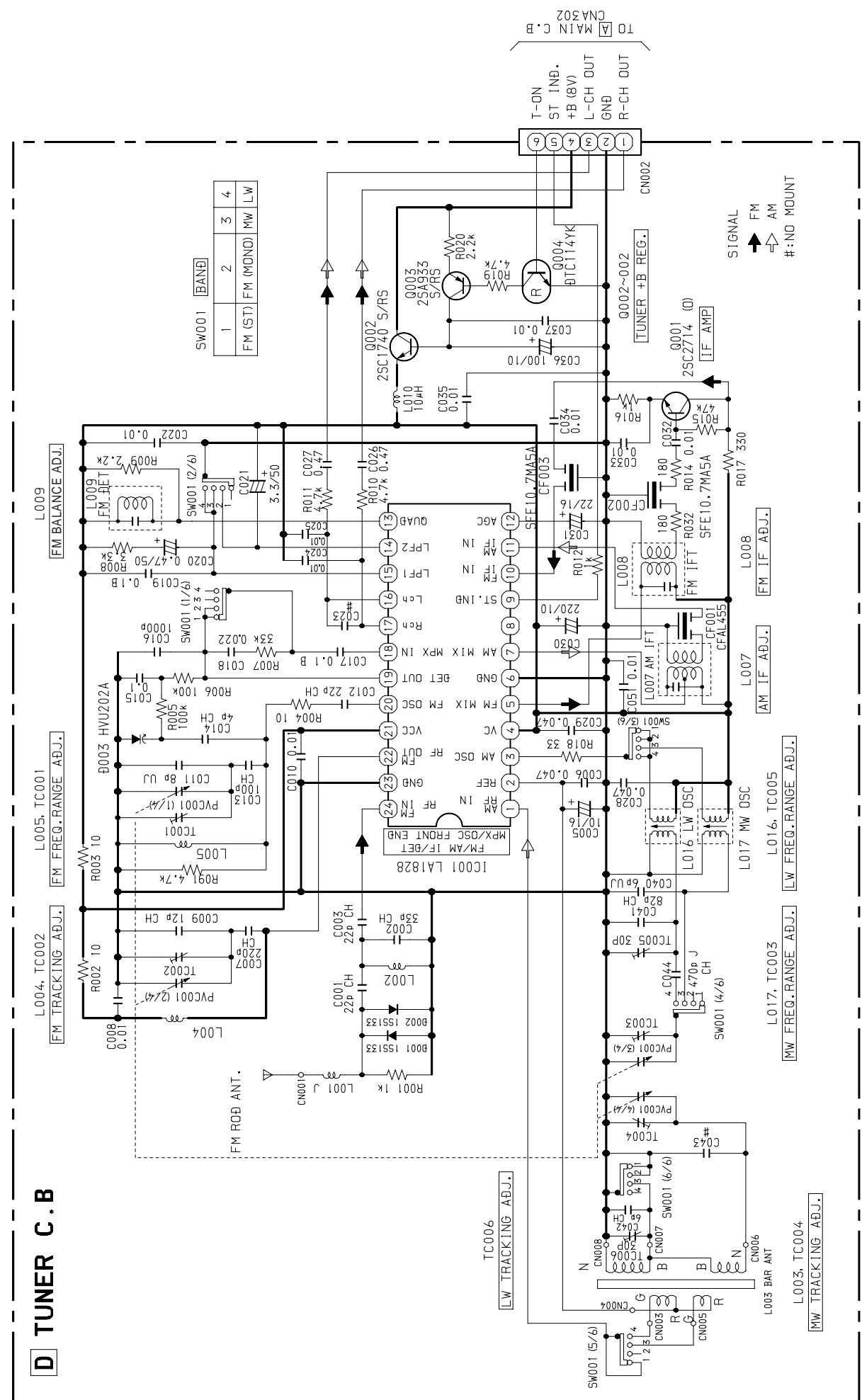




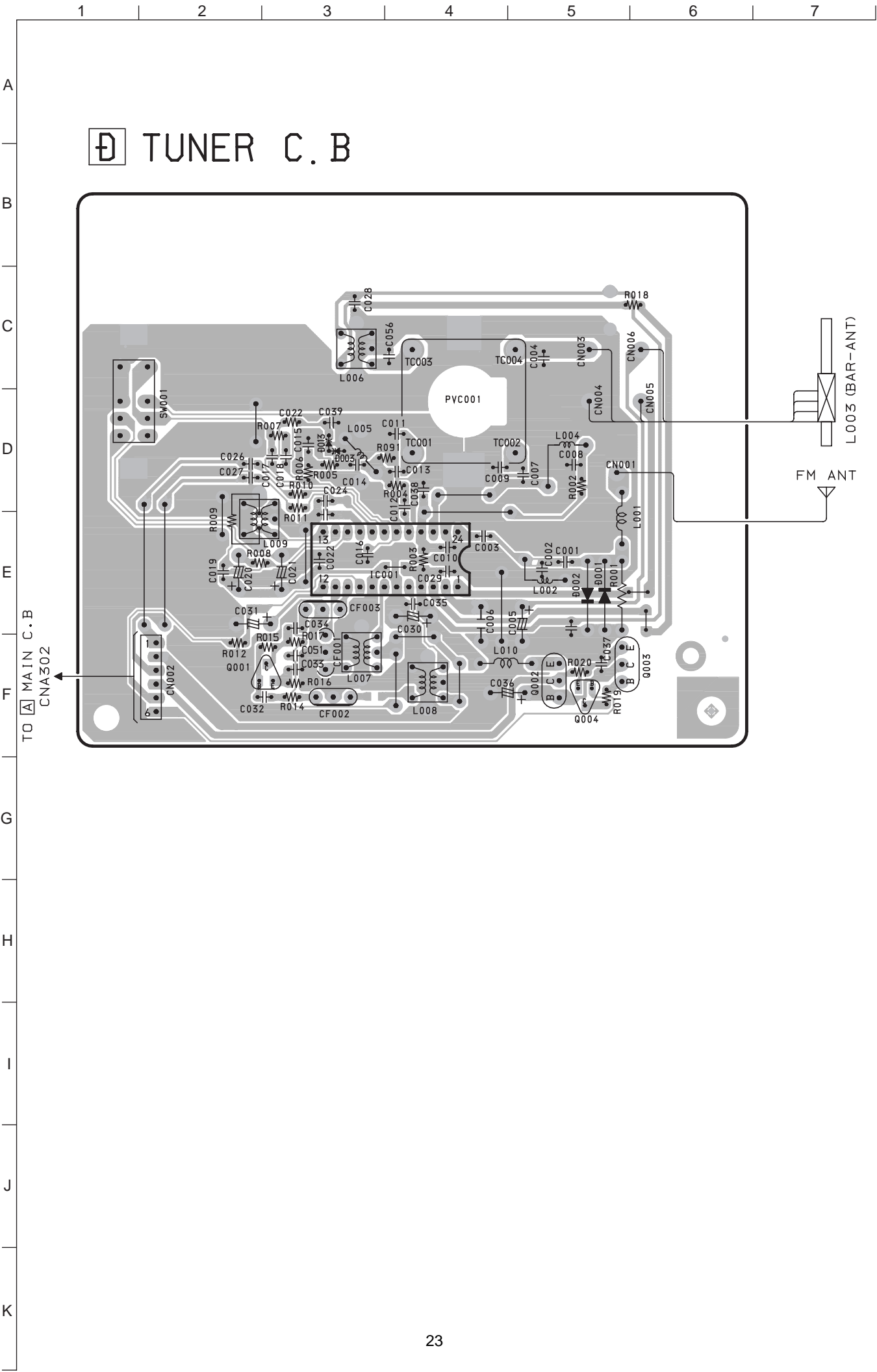
SCHEMATIC DIAGRAM-4 (TUMER: HA, HE, HR, U)



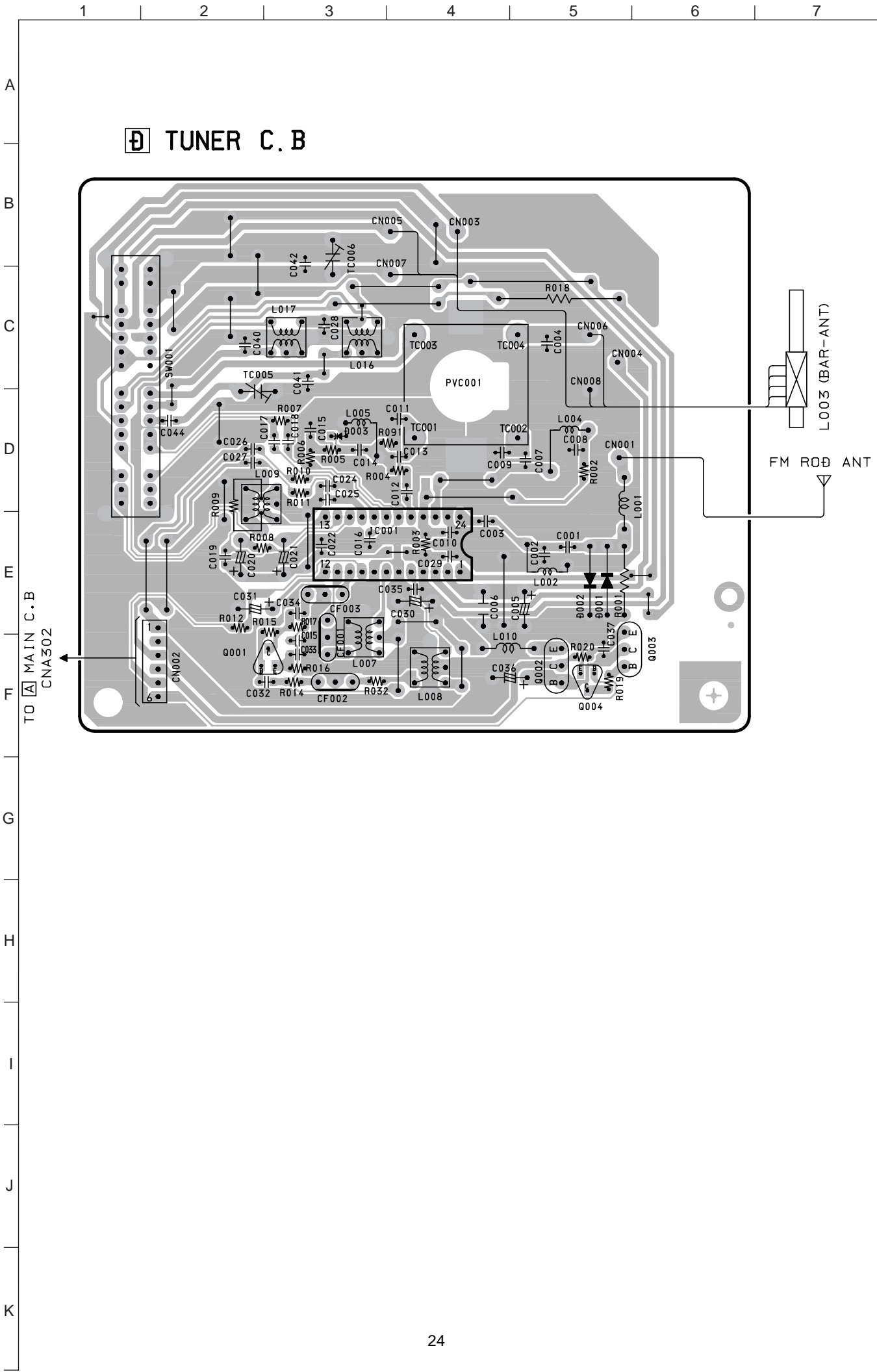
SCHEMATIC DIAGRAM-5 (TUMER: K, EZ)



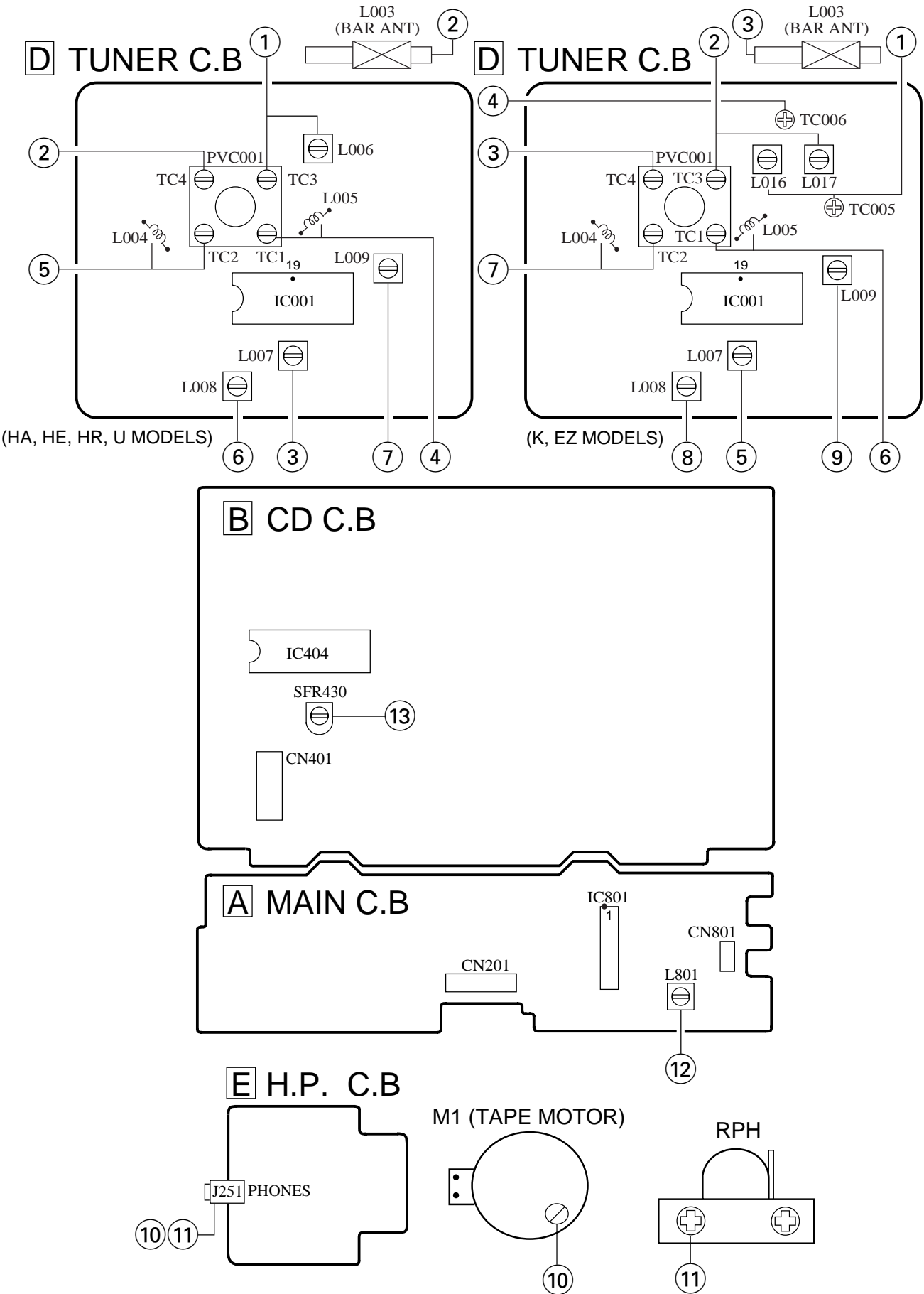
WIRING-4 (TUNER:HA, HE, HR, U)



WIRING-5 (TUNER: K, EZ)



ELECTRICAL ADJUSTMENT



< TUNER SECTION >  
(HA, HE, HR, U MODELS)

- AM Freq. Range Adjustment  
L006 ..... 517kHz  
TC003 ..... 1750kHz
- AM Tracking Adjustment  
L003 ..... 600kHz  
TC004 ..... 1400kHz
- AM IF Adjustment  
Settings: • Test point: IC001 (LA1828) 19PIN  
• Adjustment location: L007  
Method: Adjust L007 so that the output level at 1400kHz becomes maximum.
- FM Freq. Range Adjustment  
L005 ..... 87.0MHz  
TC001 ..... 109.0MHz
- FM Tracking Adjustment  
L004 ..... 88.0MHz  
TC002 ..... 108.0MHz
- FM IF Adjustment  
Settings: • Test point: IC001 (LA1828) 19PIN  
• Adjustment location: L008  
Method: Adjust L008 so that the output level at 98.0MHz becomes balanced.
- FM Balance Adjustment  
Settings: • Test point: IC001 (LA1828) 19PIN  
• Adjustment location: L009  
Method: Adjust L009 so that the output level at 98.0MHz becomes balanced.

(K, EZ MODELS)

- LW Freq. Range Adjustment  
L016 ..... 145kHz  
TC005 ..... 295kHz
- MW Freq. Range Adjustment  
L017 ..... 515kHz  
TC003 ..... 1635kHz
- MW Tracking Adjustment  
L003 ..... 600kHz  
TC004 ..... 1400kHz
- LW Tracking Adjustment  
TC006 ..... 288kHz
- AM IF Adjustment  
Settings: • Test point: IC001 (LA1828) 19PIN  
• Adjustment location: L007  
Method: Adjust L007 so that the output level at 1400kHz becomes maximum.
- FM Freq. Range Adjustment  
L005 ..... 87.4MHz  
TC001 ..... 108.3MHz

- FM Tracking Adjustment  
L004 ..... 88.0MHz  
TC002 ..... 108.0MHz
  - FM IF Adjustment  
Settings: • Test point: IC001 (LA1828) 19PIN  
• Adjustment location: L008  
Method: Adjust L008 so that the output level at 98.0MHz becomes balanced.
  - FM Balance Adjustment  
Settings: • Test point: IC001 (LA1828) 19PIN  
• Adjustment location: L009  
Method: Adjust L009 so that the output level at 98.0MHz becomes balanced.
- < DECK SECTION >
- Tape Speed Adjustment  
Settings : • Test tape : TTA-100  
• Test point : J251 (PHONES jack)  
• Adjustment location : SFR of deck motor  
Method : Play back the test tape and adjust SFR so that the frequency counter reads 3000Hz  $\pm$  30Hz.

- Head Azimuth Adjustment  
Settings : • Test tape : TTA-320  
• Test point : J251 (PHONES jack)  
• Adjustment location : Azimuth adjustment screw  
Method : Play back the 8kHz signal of the test tape and adjust screw so that the output becomes maximum.
- Bias frequency Adjustment  
L801 ..... 85kHz  $\pm$  0.5kHz

< CD SECTION >

- FE Balance Adjustment  
Settings : • Test point : IC401 PIN58 (VR), IC401 PIN 20 (FE)  
• Adjustment location : SFR430  
Method : Playback the disc and adjust SFR430 so that the test point voltage becomes 0V.



IC DESCRIPTION  
IC, LA9241ML

Pin No.	Pin Name	I/O	Description
1	FIN2	I	Pin to which external pickup photo diode is connected. RF signal is created by adding with the FIN1 pin signal. FE signal is created by subtracting from the FIN1 pin signal.
2	FIN1	I	Pin to which external pickup photo diode is connected.
3	E	I	Pin to which external pickup photo diode is connected. TE signal is created by subtracting from the F pin signal.
4	F	I	Pin to which external pickup photo diode is connected.
5	TB	I	DC component of the TE signal is input.
6	TE-	I	Pin to which external resistor setting the TE signal gain is connected between the TE pin.
7	TE	O	TE signal output pin.
8	TESI	I	TES “Track Error Sense” comparator input pin. TE signal is passed through a band-pass filter then input.
9	SCI	I	Shock detection signal input pin.
10	TH	I	Tracking gain time constant setting pin.
11	TA	O	TA amplifier output pin.
12	TD-	I	Pin to which external tracking phase compensation constants are connected between the TD and VR pins.
13	TD	I	Tracking phase compensation setting pin.
14	JP	I	Tracking jump signal (kick pulse) amplitude setting pin.
15	TO	O	Tracking control signal output pin.
16	FD	O	Focusing control signal output pin.
17	FD-	I	Pin to which external focusing phase compensation constants are connected between the FD and FA pins.
18	FA	I	Pin to which external focusing phase compensation constants are connected between the FD– and FA– pins.
19	FA-	I	Pin to which external focusing phase compensation constants are connected between the FA and FE pins.
20	FE	O	FE signal output pin.
21	FE-	I	Pin to which external FE signal gain setting resistor is connected between the FE pin.
22	AGND	—	Analog signal GND.
23	SP	O	Signal ended output of the CV+and CV- pin input signal.
24	SPI	I	Spndle amp input.
25	SPG	I	Pin to which external spindle gain setting resistor in 12 cm mode is connected.
26	SP-	I	Pin to which external spindle phase compensation constants are connected together with SPD pin.
27	SPD	O	Spindle control signal output pin.
28	SLEQ	I	Pin to which external sled phase compensation constants are connected.
29	SLD	O	Sled control signal output pin.
30, 31	SL-, SL+	I	Sled advance signal input pin from microprocessor.
32, 33	JP-, JP+	I	Tracking jump signal input pin from DSP.
34	TGL	I	Tracking gain control signal input from DSP. Low gain when TGL = H.
35	TOFF	I	Tracking off control signal input pin from DSP. Off when TOFF = H.

Pin No.	Pin Name	I/O	Description
36	TES	O	Pin from which TES signal is output to DSP.
37	HFL	O	“High Frequency Level” is used to judge whether the main beam position is on top of bit or on top of mirror.
38	SLOF	I	Sled servo off control input pin.
39, 40	CV–, CV+	I	CLV error signal input pin from DSP.
41	RFSM	O	RF output pin.
42	RFS-	I	RF gain setting and EFM signal 3T compensation constant setting pin together with RFSM pin.
43	SLC	O	“Slice Level Control” is the output pin which controls the RF signal data slice level by DSP.
44	SLI	I	Input pin which control the data slice level by the DSP.
45	DGND	—	Digital system GND.
46	FSC	O	Output pin to which external focus search smoothing capacitor is connected.
47	TBC	I	“Tracking Balance Control” EF balance variable range setting pin.
48	NC	—	No connection.
49	DEF	O	Disc defect detector output pin.
50	CLK	I	Reference clock input pin. 4.23 MHz of the DSP is input.
51	CL	I	Microprocessor command clock input pin.
52	DAT	I	Microprocessor command data input pin.
53	CE	I	Microprocessor command chip enable input pin.
54	DRF	O	“Detect RF” RF level detector output.
55	FSS	I	“Focus Search Select” focus search mode ( $\pm$ search/+ search) select pin.
56	VCC2	—	Servo system and digital system Vcc pin.
57	REFI	—	Pin to which external bypass capacitor for reference voltage is connected.
58	VR	O	Reference voltage output pin.
59	LF2	I	Disc defect detector time constant setting pin.
60	PH1	I	Pin to which external capacitor for RF signal peak holding is connected.
61	BH1	I	Pin to which external capacitor for RF signal bottom holding is connected.
62	LDD	O	APC circuit output pin.
63	LDS	I	APC circuit input pin.
64	VCC1	—	RF system Vcc pin.

IC, LC78622ED

Pin No.	Pin Name	I/O	Description	
1	DEFI	I	Defect sense signal (DEF) input pin. (Connect to 0V when not used).	
2	TAI	I	For PLL.	Test signal input pin with built-in pull-down resistor. Be sure to connect to 0V.
3	PDO	O		Phase comparator output pin to control external VCO.
4	VVSS	—		GND pin for built-in VCO. Be sure to connect to 0V.
5	ISET	I		Pin to which external resistor adjusting the PD0 output current.
6	VVDD	—		Power supply pin for built-in VCO.
7	FR	I		Pin for VCO frequency range adjustment.
8	VSS	—	Digital system GND. Be sure to connect to 0V.	
9	EFMO	O	For slice level control.	EFM signal output pin.
10	EFMIN	I		EFM signal input pin.
11	T2	I	Test signal input pin with built-in pull-down resistor. Be sure to connect to 0V.	
12, 13	CLV+, CLK-	O	Disc motor control output. Three level output is possible using command.	
14	V/P	O	Rough servo or phase control automatic selection monitoring output pin. Rough servo at H. Phase servo at L.	
15	HFL	I	Track detect signal input pin. Schmidt input.	
16	TES	I	Tracking error signal input pin. Schmidt input.	
17	TOFF	O	Tracking OFF output pin.	
18	TGL	O	Tracking gain selection output pin. Gain boost at L.	
19, 20	JP+, JP-	O	Track jump control signal output pin. Three level output is possible using command.	
21	PCK	O	EFM data playback clock monitoring pin 4.3218 MHz when phase is locked in.	
22	FSEQ	O	Sync signal detection output pin. H when the sync signal which is detected from EFM signal and thesync signal which is internally generated agree.	
23	VDD	—	Digital system power supply pin.	
24	SL+	O	Moves the sled to outer circumference.	
25	SL-	O	Moves the sled to inner circumference.	
26	—	—	Not connected.	
27	PUIN	I	CD pickup inner switch detection.	
28	RW	O	Read, wright signal.	
29	EMPH	O	De-emphasis monitor output pin. De-emphasis disc is being played back at H.	
30	C2F	O	C2 flag output pin.	
31	DOUT	O	DIGITAL OUT output pin. (EIAJ format).	
32, 33	T3, T4	I	Test signal input pin with built-in pull-down resistor. Be sure to connect to 0V.	
34	N.C.	—	Not used. Set the pin to open.	
35	MUTEL	O	L-channel 1-bit DAC.	L-channel mute output pin.
36	LVDD	—		L-channel power supply pin.
37	LCHO	O		L-channel output pin.
38	LVSS	—		L-channel GND. Be sure to connect to 0V.
39	RVSS	—	R-channel 1-bit DAC.	R-channel GND. Be sure to connect to 0V.
40	RCHO	O		R-channel output pin.
41	RVDD	—		R-channel power supply pin.
42	MUTER	O		R-channel mute output pin.

Pin No.	Pin Name	I/O	Description
43	XVDD	—	Crystal oscillator power supply pin.
44	XOUT	O	Pin to which external 16.9344 MHz crystal oscillator is connected.
45	XIN	I	
46	XVSS	—	Crystal oscillator GND pin. Be sure to connect to 0V.
47	SBSY	O	Subcode block sync signal output pin.
48	EFLG	O	C1, C2, single and dual correction monitoring pin.
49	PW	O	Subcode P, Q, R, S, T, U and W output pin.
50	SFSY	O	Subcode frame sync signal output pin. Falls down when subcode enters standby.
51	SBCK	I	Subcode read clock input pin. Schmidt input. (Be sure to connected to 0V when not in use.)
52	FSX	O	Pin outputting the 7.35 kHz sync signal which is generated by dividing frequency of crystal oscillator.
53	WRQ	O	Subcode Q output standby output pin.
54	RWC	I	Read/write control input pin. Schmidt input.
55	SQOUT	O	Subcode Q output pin.
56	COIN	I	Command input pin from microprocessor.
57	$\overline{\text{CQCK}}$	I	Command input read clock or subcode read input clock from SQOUT pin
58	RES	I	LC78622 reset input pin. Set this pin to L once when the main power is turned on.
59	T11	O	Test signal output pin. Use this pin as open (normally L output).
60	16M	O	16.9344 MHz output pin.
61	4.2M	O	4.2336 MHz output pin.
62	T5	I	Test signal input pin with built-in pull-down resistor. Be sure to connect to 0V.
63	$\overline{\text{CS}}$	I	Chip select signal input pin with built-in pull-down resistor. Be sure to connect to 0V while it is not controlling.
64	T1	I	Test signal input pin without built-in pull-down resistor. Be sure to connect to 0V.

IC, LC865516A-5P16

Pin No.	Pin Name	I/O	Description
1	$\overline{\text{SEG E}}$	O	SEG E control.
2	$\overline{\text{SEG F}}$	O	SEG F control.
3	$\overline{\text{SEG G}}$	O	SEG G control.
4	NC	—	Not connected.
5	I-RES	I	Micro processor reset input
6	XT(IN)	I	Connected to an external 32.768 kHz crystal oscillator.
7	NC	—	Not connected.
8	XT2(OUT)	O	Connected to an external 32.768 kHz crystal oscillator.
9	VSS	—	GND.
10	CF1(IN)	I	Connected to an external 5.76 MHz ceramic filter.
11	CF2(OUT)	O	Connected to an external 5.76 MHz ceramic filter.
12	VDD	—	Microprocessor power supply (+5V).
13	I-KEY0	I	Key AD input. (AD)
14	I-KEY1	I	Key AD input. (AD)
15	I-MOTOR	I	Deck status input. (AD)
16	I-CD SW	I	CD door switch status input.
17	O-SHIFT	O	Main clock shift output.
18	NC	—	Not connected.
19	O-BASS LED	O	BASS LED ON/OFF control output. (Not connected)
20	O-QS LED	O	Q sound LED ON/OFF control output. (Not connected)
21	O-SFT LED	—	Not connected.
22	I-DRF	I	CD RF level detection input.
23	I-WRQ	I	CD subcode Q standby input.
24	NC	—	Not connected.
25	I-REM	—	Remote control input.
26	O-CD ON	O	CD power control output.
27	O-TU ON	O	TU power control output.
28	O-P.CONT	O	The main power supply control output.
29	NC	—	Not connected.
30	O-BEAT	O	Beat control.
31	O-MUTE	O	Main mute output.
32	O-DIGIT	O	7-segment LED power supply control output.
33	O-SEG RPEAT	O	REPEAT LED ON/OFF control output.
34	O-COIN	O	CD command output.
35	I-SQOUT	I	CD subcode Q input.
36	O-CQCK	O	CD command/CLK for subcode.
37	O-WRC	O	CD read/write control output.
38	O-DATA	O	Data output to M62349FP.
39	O-CD LED	O	LED ON/OFF control output for the CD function.
40	O-TU LED	O	LED ON/OFF control output for the TU function.
41	O-TA LED	O	LED ON/OFF control output for the TA function. (Not connected)

Pin No.	Pin Name	I/O	Description
42	NC	—	Not connected.
43	$\overline{\text{SEG DP}}$	O	SEG DP control.
44	$\overline{\text{SEG A}}$	O	SEG A control.
45	$\overline{\text{SEG B}}$	O	SEG B control.
46	$\overline{\text{SEG C}}$	O	SEG C control.
47	$\overline{\text{SEG D}}$	O	SEG D control.
48	NC	—	Not connected.

MECHANICAL PARTS LIST 1/1

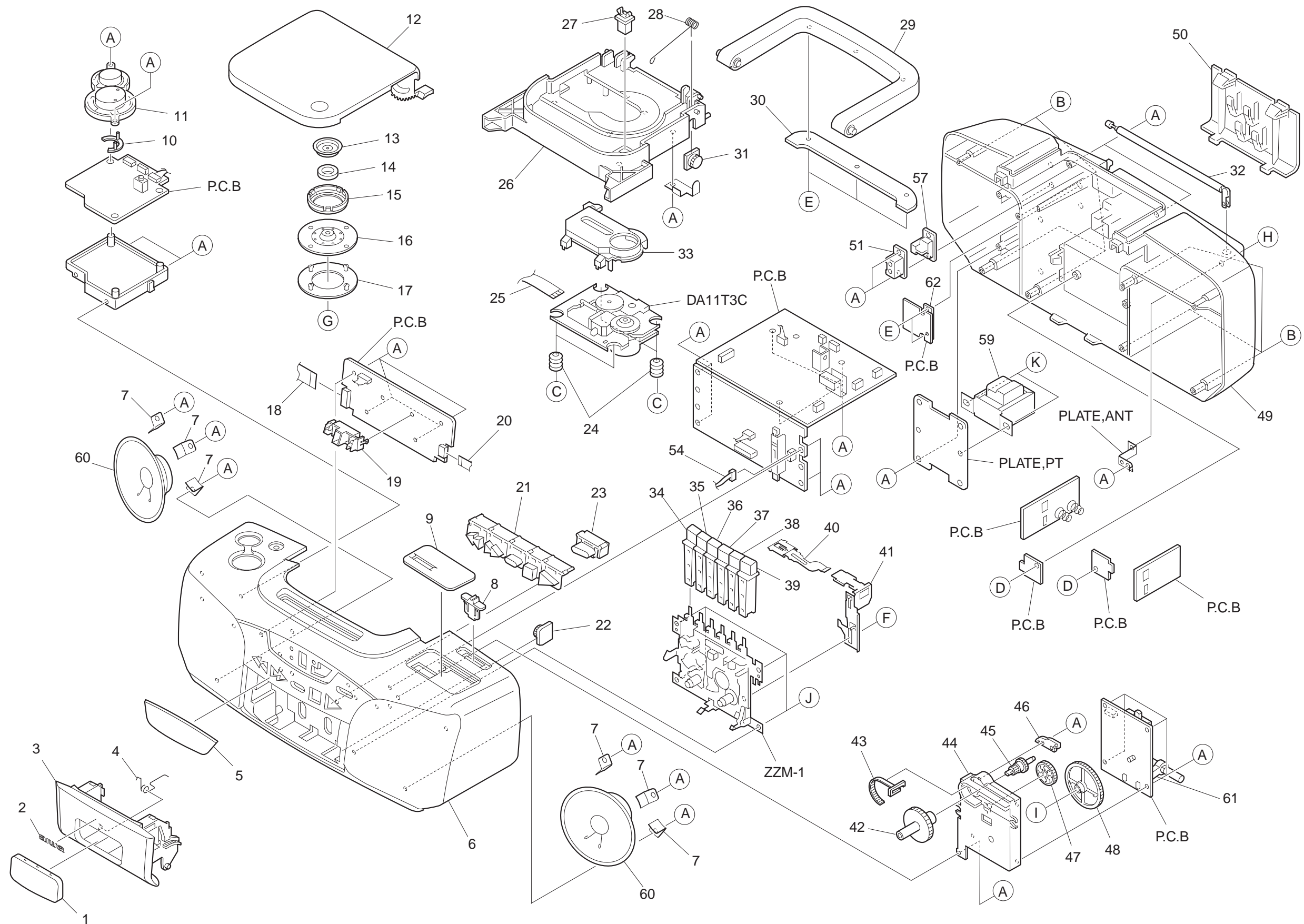
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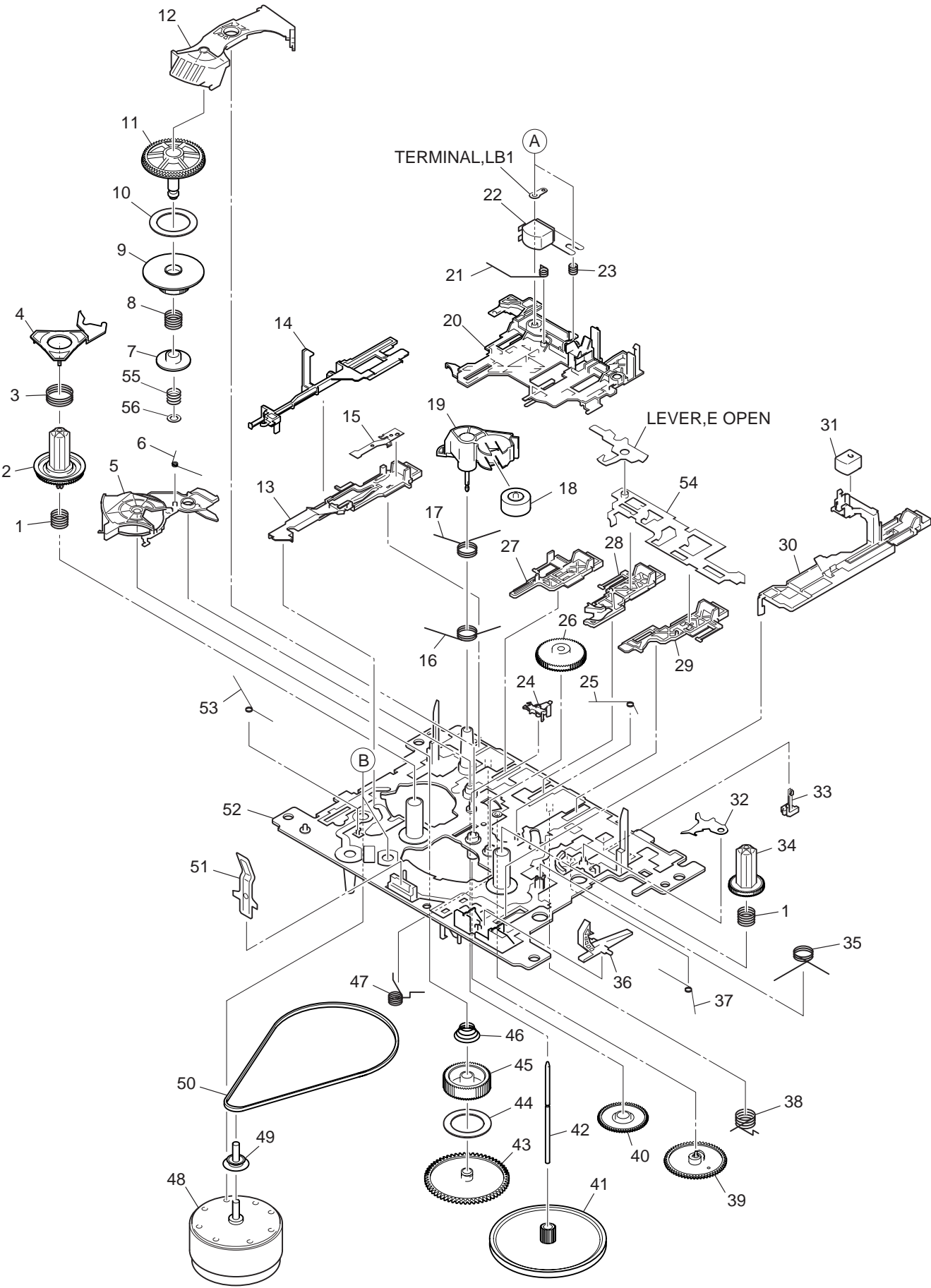
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1	8A-CDA-006-010		WINDOW,CASS	21	8A-CDA-016-010		KEY,CD
<110HRJ(S),100K(S),99K(S),100EZ(S),170U(S),170K(S),170HA(S)>							<EXCEPT 100EZ(P),100EZ(L),110EZ(L)>
1	8A-CDA-062-010		WINDOW,CASS D	21	8A-CDA-078-010		KEY,CD EZ L
			<100HE(S),110EZ(S),100HRJ(S)>				<100EZ(P),100EZ(L),110EZ(L)>
1	8A-CDA-072-010		WINDOW,CASS EZ L<100EZ(L)>	22	87-063-165-010		OIL-DMPR 150
1	8A-CDA-096-010		WINDOW,CASS EZ P<100EZ(P)>	23	8A-CDA-017-010		KEY,MODE
1	8A-CDA-128-010		WINDOW,CASS L<110EZ(L)>				<EXCEPT 100EZ(P),100EZ(L),110EZ(L)>
				23	8A-CDA-079-010		KEY,MODE EZ L
2	87-B00-010-010		BADGE,AIWA 30.5-5.2 S 2.5L				<100EZ(P),100EZ(L),110EZ(L)>
3	8A-CDA-003-010		LID,CASS				
			<EXCEPT 100EZ(P),100EZ(L),110EZ(L)>	24	88-CH6-220-010		CUSHION,CD A
3	8A-CDA-069-010		LID,CASS EZ L<100EZ(L)>	25	8A-CDA-621-010		FF-CABLE,16P CD-RF
3	8A-CDA-093-010		LID,CASS EZ P<100EZ(P)>	26	8A-CDA-012-010		CHAS,CD<EXCEPT 100EZ(P),100EZ(L)>
3	8A-CDA-125-010		LID,CASS L<110EZ(L)>	26	8A-CDA-180-010		CHAS,CD EZ L<100EZ(L)>
				26	8A-CDA-114-010		CHAS,CD EZ P<100EZ(P)>
4	8A-CDA-212-010		SPR-T,CASS				
5	8A-CDL-031-010		WINDOW,LED<170K(S),170HA(S)>	27	87-036-389-010		SW,PUSH LOCK
5	8A-CDA-008-010		WINDOW,LED<100EZ(L)>	28	8A-CDA-211-010		SPR-T,CD
5	8A-CDA-039-010		WINDOW,LED LH	29	8A-CDA-010-110		HANDL,ARM
			<110HRJ(S),110EZ(S),110EZ(L)>				<EXCEPT 100EZ(P),100EZ(L),110EZ(L)>
5	8A-CDA-113-010		WINDOW,LED LOW EZ P<100EZ(P)>	29	8A-CDA-074-010		HANDL,ARM EZ L<100EZ(L)>
				29	8A-CDA-098-010		HANDL,ARM EZ P<100EZ(P)>
5	8A-CDA-042-010		WINDOW,LED LOW LH				
			<100HE(S),100K(S),99K(S),100EZ(S),100HRJ(S)>	29	8A-CDA-130-010		HANDL,ARM L<110EZ(L)>
5	8A-CDL-033-010		WINDOW,LED U<170U(S)>	30	8A-CDA-011-010		HANDL,COVER
6	8A-CDA-028-010		CABI ASSY,FRONT				<EXCEPT 100EZ(P),100EZ(L),110EZ(L)>
			<110HRJ(S),170U(S),170HA(S)>	30	8A-CDA-075-010		HANDL,COVER EZ L<100EZ(L)>
6	8A-CDA-120-010		CABI ASSY,FRONT A99<99K(S)>	30	8A-CDA-099-010		HANDL,COVER EZ P<100EZ(P)>
6	8A-CDA-034-010		CABI ASSY,FRONT EZ	30	8A-CDA-131-010		HANDL,COVER L<110EZ(L)>
			<110EZ(S),170K(S)>				
				31	87-NF8-220-010		DMPR,150
6	8A-CDA-122-010		CABI ASSY,FRONT EZ L<110EZ(L)>	32	8Z-CH4-640-010		ANT,ROD
6	8A-CDA-036-010		CABI ASSY,FRONT LOW EZ	33	8Z-CDB-169-010		PANEL,CD SANYO
			<100K(S),100EZ(S)>	34	8A-CDA-027-010		KEY,PAUSE
6	8A-CDA-066-010		CABI ASSY,FRONT LOW EZ L				<EXCEPT 100EZ(P),100EZ(L),110EZ(L)>
			<100EZ(L)>	34	8A-CDA-088-010		KEY,PAUSE EZ L<100EZ(L)>
6	8A-CDA-090-010		CABI ASSY,FRONT LOW EZ P				
			<100EZ(P)>	34	8A-CDA-112-010		KEY,PAUSE EZ P<100EZ(P)>
6	8A-CDA-054-010		CABI ASSY,FRONT LOW HR	34	8A-CDA-143-010		KEY,PAUSE L<110EZ(L)>
			<100HE(S),100HRJ(S)>	35	8A-CDA-026-010		KEY,STOP
							<EXCEPT 100EZ(P),100EZ(L),110EZ(L)>
7	8A-CDA-206-010		HLDR,SPKR	35	8A-CDA-087-010		KEY,STOP EZ L<100EZ(L)>
8	8A-CDA-020-010		KNOB,SL BAND	35	8A-CDA-111-010		KEY,STOP EZ P<100EZ(P)>
			<110HRJ(S),100HE(S),100HRJ(S),170U(S),170HA(S)>				
8	8A-CDA-059-010		KNOB,SL BAND EZ	35	8A-CDA-142-010		KEY,STOP L<110EZ(L)>
			<100K(S),110EZ(S),99K(S),100EZ(S),170K(S)>	36	8A-CDA-025-010		KEY,FF
8	8A-CDA-081-010		KNOB,SL BAND EZ L<100EZ(L)>				<EXCEPT 100EZ(P),100EZ(L),110EZ(L)>
8	8A-CDA-105-010		KNOB,SL BAND EZ P<100EZ(P)>	36	8A-CDA-085-010		KEY,FF EZ L<100EZ(L)>
				36	8A-CDA-109-010		KEY,FF EZ P<100EZ(P)>
8	8A-CDA-136-010		KNOB,SL BAND L<110EZ(L)>	36	8A-CDA-140-010		KEY,FF L<110EZ(L)>
9	8A-CDA-009-010		WINDOW,TU<170U(S)>				
9	8A-CDA-045-010		WINDOW,TU EZ	37	8A-CDA-024-010		KEY,REW
			<100K(S),110EZ(S),99K(S),100EZ(S),170K(S)>				<EXCEPT 100EZ(P),100EZ(L),110EZ(L)>
9	8A-CDA-073-010		WINDOW,TU EZ L<100EZ(L)>	37	8A-CDA-086-010		KEY,REW EZ L<100EZ(L)>
9	8A-CDA-097-010		WINDOW,TU EZ P<100EZ(P)>	37	8A-CDA-110-010		KEY,REW EZ P<100EZ(P)>
				37	8A-CDA-141-010		KEY,REW L<110EZ(L)>
9	8A-CDA-046-010		WINDOW,TU HR	38	8A-CDA-023-010		KEY,PLAY
			<110HRJ(S),100HE(S),100HRJ(S),170HA(S)>				<EXCEPT 100EZ(P),100EZ(L),110EZ(L)>
9	8A-CDA-129-010		WINDOW,TU L<110EZ(L)>				
10	8A-CDA-007-010		LENS,LED	38	8A-CDA-084-010		KEY,PLAY EZ L<100EZ(L)>
11	8A-CDA-019-010		KEY,VOL	38	8A-CDA-108-010		KEY,PLAY EZ P<100EZ(P)>
			<EXCEPT 100EZ(P),100EZ(L),110EZ(L)>	38	8A-CDA-139-010		KEY,PLAY L<110EZ(L)>
11	8A-CDA-080-010		KEY,VOL EZ L<100EZ(L)>	39	8A-CDA-022-010		KEY,REC
							<EXCEPT 100EZ(P),100EZ(L),110EZ(L)>
11	8A-CDA-104-010		KEY,VOL EZ P<100EZ(P)>	39	8A-CDA-083-010		KEY,REC EZ L<100EZ(L)>
11	8A-CDA-135-010		KEY,VOL L<110EZ(L)>				
12	8A-CDA-004-010		LID,CD	39	8A-CDA-107-010		KEY,REC EZ P<100EZ(P)>
<110HRJ(S),100K(S),99K(S),100EZ(S),170U(S),170K(S),170HA(S)>				39	8A-CDA-138-010		KEY,REC L<110EZ(L)>
12	8A-CDA-061-010		LID,CD D	40	8A-CDA-221-010		SPR-P,REC<EXCEPT 100HE(S)>
			<100HE(S),110EZ(S),100HRJ(S)>	41	8A-CDA-220-010		PLATE,REC
12	8A-CDA-070-010		LID,CD EZ L<100EZ(L)>	42	8A-CDA-021-010		KNOB,RTRY TU
							<EXCEPT 100EZ(P),100EZ(L),110EZ(L)>
12	8A-CDA-094-010		LID,CD EZ P<100EZ(P)>				
12	8A-CDA-126-010		LID,CD L<110EZ(L)>	42	8A-CDA-082-010		KNOB,RTRY TU EZ L<100EZ(L)>
13	8A-CDA-213-010		COVER, CHUCK	42	8A-CDA-106-010		KNOB,RTRY TU EZ P<100EZ(P)>
14	87-036-368-010		MAGNET	42	8A-CDA-137-010		KNOB,RTRY TU L<110EZ(L)>
15	8A-CDA-207-010		HLDR,CHUCK	43	8A-CDA-013-010		POINTER,TU
				44	8A-CDA-201-010		HLDR,TU
16	8A-CDA-150-010		BASE,CHUCK F/M				
17	88-CD9-211-210		RING,CHUCK	45	8A-CDA-216-010		GEAR,TU B
18	8A-CDA-620-010		FF-CABLE,16P FR-MAIN	46	8A-CDA-203-010		GUIDE,GEAR
19	8A-CDA-208-110		HLDR,LED	47	8A-CDA-202-010		GEAR,RELAY
20	8A-CDA-622-010		FF-CABLE,8P CD-FR	48	8A-CDA-215-010		DRUM,TU

REF. NO	PART NO.	KANRI NO.	DESCRIPTION	REF. NO	PART NO.	KANRI NO.	DESCRIPTION
49	8A-CDL-002-010		CABI,REAR<170U(S),170K(S)>	△	57	87-A60-177-010	JACK,AC U W/SW<170U(S)>
49	8A-CDA-002-010		CABI,REAR<110EZ(S)>	58	8A-CDA-018-010		KEY,QSOUND
49	8A-CDA-118-010		CABI,REAR A99<99K(S)>				<110HRJ(S),110EZ(S),170U(S),170K(S),170HA(S)>
49	8A-CDA-124-010		CABI,REAR EZ L<110EZ(L)>	58	8A-CDA-134-010		KEY,QSOUND L<110EZ(L)>
49	8A-CDA-030-010		CABI,REAR LH<110HRJ(S)>	59	8A-CDA-612-010		PT,E 2.5W
							<EXCEPT 110HRJ(S),100HE(S),100HRJ(S),170U(S),170HA(S)>
49	8A-CDL-030-010		CABI,REAR LH<170HA(S)>	59	8A-CDA-613-010		PT,H 2.5W
49	8A-CDA-037-010		CABI,REAR LOW<100K(S),100EZ(S)>				<110HRJ(S),100HE(S),100HRJ(S),170HA(S)>
49	8A-CDA-068-010		CABI,REAR LOW EZ L<100EZ(L)>				
49	8A-CDA-092-010		CABI,REAR LOW EZ P	△	59	8A-CDA-611-010	PT,U 2.5W<170U(S)>
			<100EZ(P)>	60	8A-CH4-682-010		SPKR,10- 70HM
49	8A-CDA-038-010		CABI,REAR LOW LH	61	88-CD6-661-010		HLDR,BAR ANT.
			<100HE(S),100HRJ(S)>	62	87-A91-369-010		SW,AC SL 2 2 2 SDKGA41700
							<110HRJ(S),100HE(S),100HRJ(S),170HA(S)>
50	8A-CDA-005-010		LID,BATT	A	87-721-096-410		QT2+3-10 GLD
			<EXCEPT 100EZ(P),100EZ(L),110EZ(L)>				
50	8A-CDA-071-010		LID,BATT EZ L<100EZ(L)>	B	87-751-104-410		VT2+3-30
50	8A-CDA-095-010		LID,BATT EZ P<100EZ(P)>	C	8A-CK4-223-010		S-SCREW,CD
50	8A-CDA-127-010		LID,BATT L<110EZ(L)>	D	87-067-566-010		TAPPING SCREW, VFTT+3-6
51	8Z-CD5-634-010		COVER,AC SOCKET	E	87-352-075-210		VT2+2.6-10
				F	8A-CDA-222-010		S-SCREW,CASS+2.6-4
52	8A-CDA-626-010		CONN ASSY,2P DOOR				
53	8A-CDA-630-010		CONN ASSY,4P RPH	H	87-253-097-410		U+3-12 BLK
54	8A-CDA-633-010		CONN ASSY,4P SP	I	87-261-073-410		V+2.6-6
55	8A-CDA-631-010		CONN ASSY,4P TA-ME	J	87-751-096-410		VT2+3-10 GLD
△	57	87-A60-178-010	JACK,AC E W/SW<EXCEPT 170U(S)>				

COLOR NAME TABLE

Basic color symbol	Color	Basic color symbol	Color	Basic color symbol	Color
B	Black	C	Cream	D	Orange
G	Green	H	Gray	L	Blue
LT	Transparent Blue	N	Gold	P	Pink
R	Red	S	Silver	ST	Titan Silver
T	Brown	V	Violet	W	White
WT	Transparent White	Y	Yellow	YT	Transparent Yellow
LM	Metallic Blue	LL	Light Blue	GT	Transparent Green
LD	Dark Blue	DT	Transparent Orange		



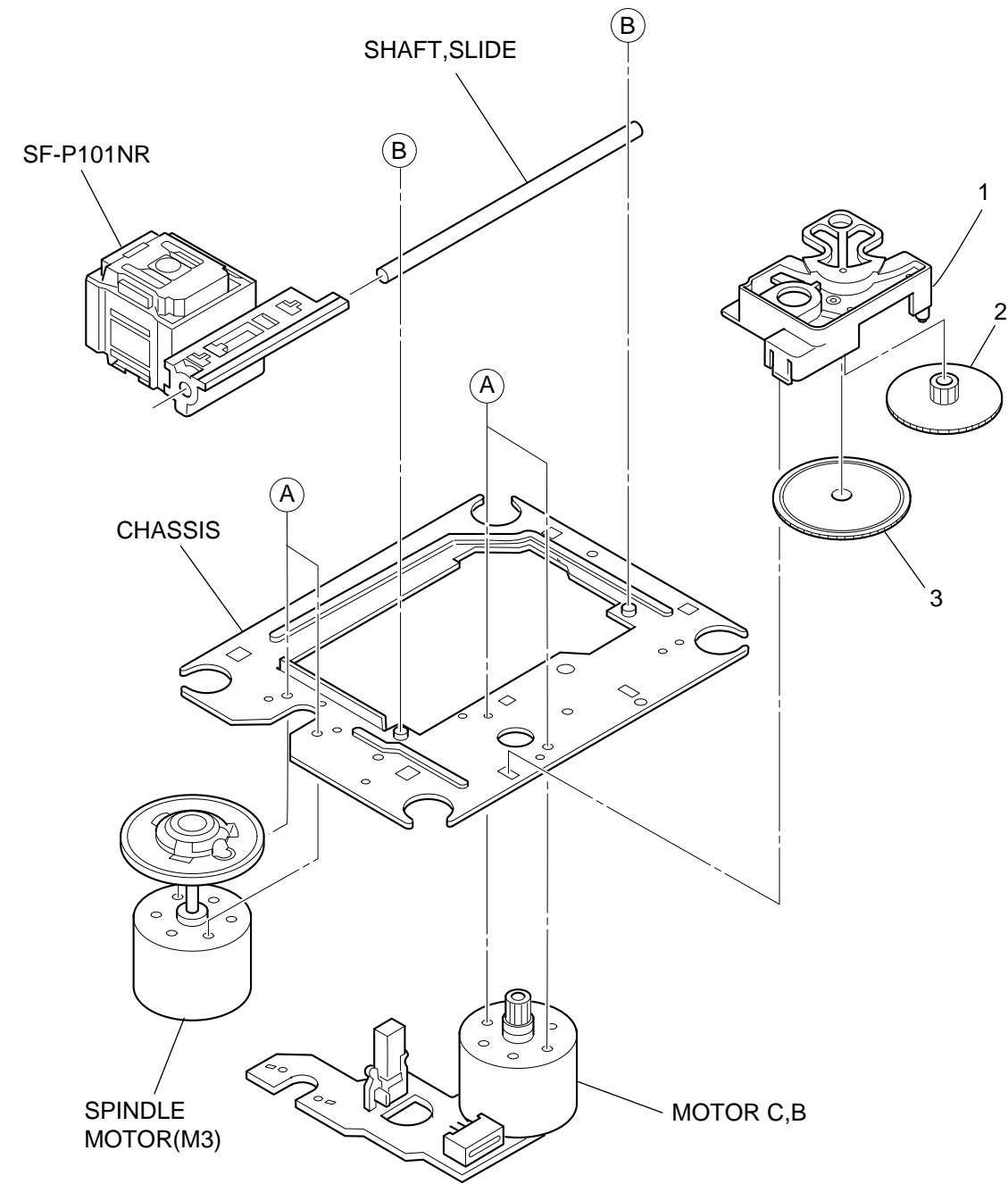


TAPE MECHANISM PARTS LIST 1/1

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REF. NO	PART NO.	KANRI NO.	DESCRIPTION	REF. NO	PART NO.	KANRI NO.	DESCRIPTION
1	8Z-ZM1-254-210		SPR-C, REEL R	31	87-A91-533-010		HEAD, EH PH-K380
2	8Z-ZM1-225-110		GEAR, REEL R	32	8Z-ZM1-215-010		LEVER, REC LOCK
3	8Z-ZM1-253-110		SPR-C, AUTO SENSOR	33	87-A91-492-010		SW, LEAF MSW18560
4	8Z-ZM1-217-110		LEVER, AUTO SENSOR	34	8Z-ZM1-226-010		GEAR, REEL L
5	8Z-ZM1-212-110		LEVER, T-UP	35	8Z-ZM1-241-010		SPR-T, PLAY
6	8Z-ZM1-245-010		SPR-T, AUTO	36	8Z-ZM1-220-010		LEVER, REC SENSOR
7	8Z-ZM1-236-010		CLR, SLIP FF/REW	37	8Z-ZM1-249-010		SPR-T, FR
8	8Z-ZM1-252-010		SPR-C, FF/REW	38	8Z-ZM1-242-110		SPR-T, FF/REW
9	8Z-ZM1-230-010		GEAR, SLIP FF/REW A	39	8Z-ZM1-229-010		GEAR, CAM
10	8Z-ZM1-266-010		FELT, FF/REW	40	8Z-ZM1-232-010		GEAR, IDL FF/REW
11	8Z-ZM1-231-010		GEAR, SLIP FF/REW B	41	8Z-ZM1-234-010		FLY-WHL, ZZM-1
12	8Z-ZM1-213-010		LEVER, FF/REW	42	8Z-ZM1-267-010		SHAFT, CAPSTAN 2
13	8Z-ZM1-209-110		LEVER, PAUSE	43	8Z-ZM1-228-010		GEAR, SLIP T-UP B
14	8Z-ZM1-222-010		LEVER, E-LOCK M	44	8Z-ZM1-265-010		FELT, T-UP
15	8Z-ZM1-256-010		SPR-P, PAUSE	45	8Z-ZM1-227-010		GEAR, SLIP T-UP A
16	8Z-ZM1-244-010		SPR-T, T-UP	46	8Z-ZM1-251-110		SPR-C, T-UP SLIP
17	8Z-ZM1-247-210		SPR-T, PINCH	47	8Z-ZM1-243-210		SPR-T, STOP/PAUSE
18	8Z-ZM1-261-110		ROLLER ASSY, PINCH	48	87-A91-531-010		MOT, MS15C2L
19	8Z-ZM1-221-010		LEVER, PINCH	49	8Z-ZM1-271-010		PULLEY, MOT ZZM-1
20	8Z-ZM1-205-210		LEVER, PLAY	50	8Z-ZM1-264-010		BELT, MAIN S
21	8Z-ZM1-248-010		SPR-T, BRG	51	8Z-ZM1-260-010		SPR-P, CASSETTE
22	87-A90-403-110		HEAD, RPH MS15R	52	8Z-ZM1-201-310		CHAS ASSY, ZZM-1
23	84-ZM2-227-310		SPR-C, AZIMUTH	53	8Z-ZM1-255-110		SPR-T, E-LOCK
24	8Z-ZM1-216-010		LEVER, AUTO	54	8Z-ZM1-214-010		LEVER, LOCK
25	8Z-ZM1-246-010		SPR-T, AUTO 2	55	8Z-ZM1-257-110		SPR-C, F/R
26	8Z-ZM1-233-010		GEAR, IDL REW	56	8Z-ZM1-275-010		W-L, 1.47-4-0.25
27	8Z-ZM1-208-010		LEVER, STOP	A	84-ZM2-242-010		S-SCREW, AZ1-2-6.4
28	8Z-ZM1-207-010		LEVER, FF	B	8Z-ZM1-270-110		V+2.6 ZZM-1
29	8Z-ZM1-206-010		LEVER, REW				
30	8Z-ZM1-211-110		LEVER, REC 2				

CD MECHANISM EXPLODED VIEW 1/1



CD MECHANISM PARTS LIST 1/1

DESCRIPTIONで判断できない物は "REFERENCE NAME LIST" を参照してください。  
If can't understand for Description please kindly refer to "REFERENCE NAME LIST".

REF. NO	PART NO.	KANRI NO.	DESCRIPTION
1	S2-121-A28-400		COVER GEAR
2	S2-511-A21-000		GEAR MIDDLE
3	S2-511-A21-100		GEAR,DRIVE
A	S1-PN2-03R-0SE		SCR PAN PCS 2-3
B	87-261-073-410		SCR S-TPG FLT 2.6-6
ALL	M8-ZZK-E90-070		DA11T3C

ACCESSORIES/PACKAGE LIST

DESCRIPTIONで判断できない物は "REFERENCE NAME LIST" を参照してください。  
If can't understand for Description please kindly refer to "REFERENCE NAME LIST".

REF. NO	PART NO.	KANRI NO.	DESCRIPTION
	1 8A-CDA-906-010	IB,EZ(9L)FM	PDF
		<110EZ(S),100EZ(P),100EZ(L),100EZ(S),110EZ(L)>	
	1 8A-CDA-901-010	IB,H(ECA)FM	
		<110HRJ(S),100HE(S),100HRJ(S)>	
	1 8A-CDA-905-110	IB,K(E)FM<100K(S),99K(S),170K(S)>	
	1 8A-CDL-902-010	IB,LH(ESP)FM<170HA(S)>	
	1 8A-CDA-903-010	IB,U(ESF)FM<170U(S)>	
	2 8Z-CDK-962-010	RC UNIT,RC-ZAT02(VS)	
		<170U(S),170K(S),170HA(S)>	
⚠	3 87-A80-119-010	AC CORD SET ASSY,AZ<170HA(S)>	
⚠	3 87-A80-036-010	AC CORD SET ASSY,E W/FLTR VOL	
	<100HE(S),110EZ(S),100EZ(P),100EZ(L),100EZ(S),110EZ(L)>		
⚠	3 87-A80-034-010	AC CORD SET ASSY,K W/F MAY-BG	
		<100K(S),99K(S),170K(S)>	
⚠	3 87-A80-089-010	AC CORD SET,HC	
		<110HRJ(S),100HRJ(S)>	
⚠	3 87-A80-109-010	AC CORD,HK7281 BLK U<170U(S)>	
⚠	4 87-A91-017-010	PLUG,CONVERSION JT-0476	
		<110HRJ(S),100HRJ(S)>	

